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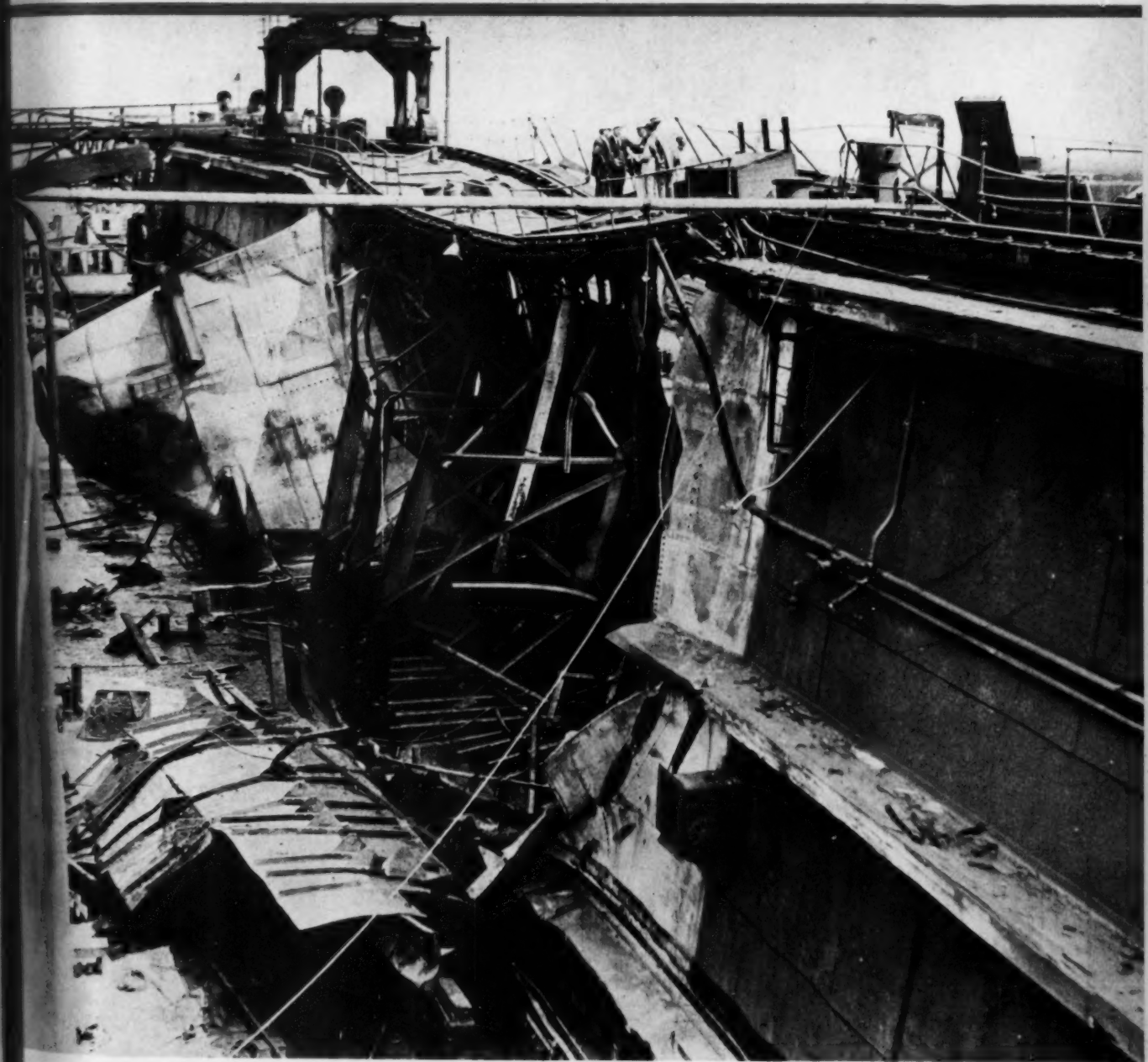
The Journal of the Fire Protection Profession Since 1877

Vol. 85, No. 7 JULY, 1932 Member A.B.C.-A.B.P.



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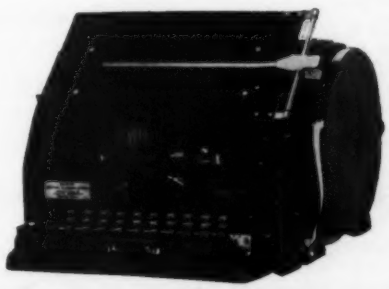

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The Publishers

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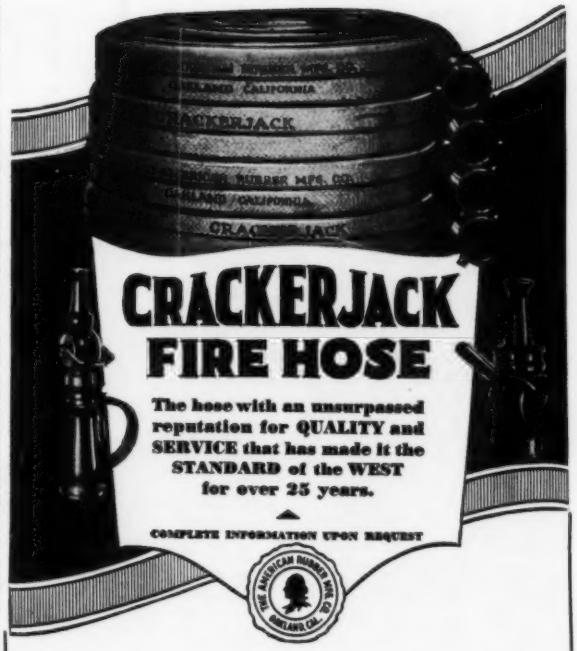
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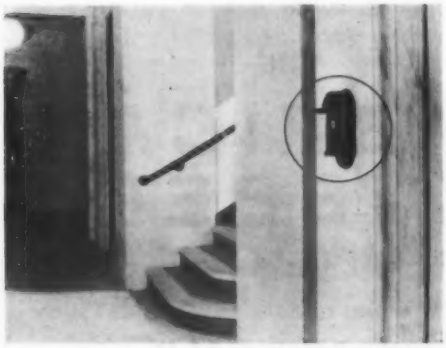

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FIRE ENGINEERING

The Journal of the Fire Protection Profession

Volume 85 JULY, 1932 Number 7

With the Editor

Smoking in Theatres

Perhaps as a leftover from the days of the German beer gardens or the so-called Sunday concerts, some managers still tolerate smoking in their theatres. Although it is true that an attempt is made to segregate the smokers from others by permitting smoking only in certain sections, such as the balcony or the boxes, the evils of this practice are not one bit diminished.

Because of the large cubical content of theatres today, with the high ceilings and with modern ventilation systems, the smoke is diluted to a point where it does not annoy persons in the audience, and as a result many do not give the matter a thought.

But there is an acute possibility that this practice will yet result in a holocaust.

Not so long ago this danger was dramatically demonstrated.

Seated next to a smoker in a "movie" was a young lady in a silk dress. In striking a match to light his cigar, the head flew off and alighted at his neighbor's feet. Luckily the man was more interested in his cigar than he was in the show and noticed what had happened. In a moment the tiny flame was stamped out.

For the layman the story ends. The Chief, who has the responsibility of guarding and of preventing the destruction of life and property from fire, can see a far different dénouement—the possibility that the tiny flame would have prompted some startled person to shout the much dreaded cry of "Fire!"

In a crowded theatre, untold loss of life might result. The largest theatre in New York City seats nearly 6,000 persons, but the panic danger is just as great in a small theatre. It was in a small theatre in Montreal, Canada, that so many children lost their lives when a panic was started. The never-to-be-forgotten fire in the Iroquois Theatre in Chicago in 1903 took a toll of 600 lives as the result of fire and panic.

Theatre managers, as a whole, are conscious of their responsibility and do not favor smoking in the main part of the theatre. But with competition as keen as it is today in the amusement field, any scheme that will promote the sale of tickets is looked upon with favor. And if "smoking in the balcony" shows added receipts in the box office, it is clear that theatres will let down barriers that now exist.

Chief Peter Steinkellner of Milwaukee recently launched a campaign to have an ordinance passed that would prohibit smoking in local theatres.

It is not a drastic measure. It is, however, a decided step for increasing the safety to theatre patrons and for decreasing the possibilities of a panic. The passage of such an ordinance does not deprive one of hours of enjoyment. It is a move in the right direction for wiping out a practice which may become serious if permitted to develop.

Fred. Sheppard

The Fire Service Instructor

A treatise to aid those responsible for training men in the fire service to develop a systematic type of teaching.

By O. D. ADAMS,
State Director for Vocational Education in Oregon, and Prof., Industrial Education, Oregon State College

and

EDWARD L. BOATRIGHT,
Battalion Chief, Portland, Ore., Fire Department, and Director, Portland Fire College

AN effort has been made by the authors of this series to make these articles as nearly "self-instructors" as possible, so that they might be of use particularly to those who may have no way of contacting a state or city vocational program. The material has all been culled, worked over and tried out under practical situations and has been satisfactory when used in the fire service.

No claim is made for originality, as the book merely sets forth the authors' experiences from the practical field. No doubt, much of the material is that indirectly obtained from others, and this the authors acknowledge gratefully. Credit is due to Charles A. Allen for the use of ideas and excerpts from his book, "The Instructor, the Man and the Job," to the members of the Portland, Ore., Fire Department, and particularly to Chief Edward Grenfell.

Chapter I.

The Instruction of Firemen

Old Methods Unsatisfactory.

In the past, firemen have learned to do their jobs by watching other firemen do their work, through a more or less hit-and-miss or trial-and-error method of instruction given by their superiors. Through their ability to absorb the information and skill employed by their co-workers (pick-up method), and through lectures given by experts or representatives of fire fighting apparatus and equipment, some progress has been made —all perhaps worthwhile, but going nowhere in particular, and getting there, because of the lack of a systematic training program.

Through years of application to their jobs, firemen have eventually sifted the essentials from the non-essentials until a fair degree of competency and ability have been achieved. It is only necessary to call attention to the progress made during the past ten years in fire-fighting methods, fire-fighting equipment and apparatus, and in fire prevention, to note that most of the improvement has come about in equipment and apparatus rather than in methods to advance the individual fireman in his vocation.

Much of the improvement made has been due to the fire insurance companies, to industrial organizations, and to a few "fire conscious" individuals scattered throughout the Fire Departments of the country. Competition in industry has set a pace requiring trained help and industrial training programs have developed quite commonly in industrial plants. Fire Departments do not have this compulsory urge of competition; nevertheless, because of the tremendous importance of fire protection, the vast amount of money involved in buildings, equipment and apparatus, the necessity of constantly learning the uses of new equipment, apparatus and methods, and the desire of firemen generally, to improve themselves, the development of a training program to train as well as to set standards of performance, is of vital importance, and, after all, training a fireman properly is being able to *instruct* him satisfactorily.

Attempts to Solve the Problem.

Some progress has been made in certain specialized fields to solve the training problem by textbooks on hydraulics, ventilation, fire prevention, chemistry, and other subjects, all valuable when put in the hands of a practical fireman, who understands and has the ability to put over this information. The weakness of this system, however, lies, first, in the fact that the average fireman has little or no experience in instructing others; that is, his previous training has not brought him up to a place where he can understand or has an appreciation of what it is all about. This is not to be wondered at. It is just as reasonable to expect that anyone unfamiliar with economics or finance could drop into a course of high finance and understand it to the degree of performance, for instance, that a banker might. Second, in courses of this kind, based purely on textbooks and the lecture method, most of the thinking and talking is done by the instructor, and while there usually is respectful attention, little opportunity is presented to the individuals to think. Third, the subject matter, or information, is usually disorganized, for practical job purposes, as well as being too technical, insofar as meeting the present needs of firemen are concerned, and illogical teaching methods are employed to put the instruction over.

Time Element a Factor.

The training of new men is dependent somewhat on other factors than those mentioned above. The fact that certain conditions are new to them makes a quick adjustment to the new situation difficult. Every fireman knows the sleepless nights, the wrought-up nerves brought about by his anxiety to "make the rig" during his first few weeks in the fire station. He has much to learn and a training program based on lectures and textbooks expounded by experts, quite often misses the mark by overlooking preliminary subject matter of more real and vital importance to the men. Information should be presented by his superiors which will enable him to make adjustments more quickly and with less cost to all concerned.

An organized vocational training program will aid in cutting down the amount of time necessary to make these adjustments, by helping the untrained man to

become more proficient in tasks to be performed and in assisting him to gain an appreciation of the importance of his job.

Standard Practice Not Developed.

It is quite commonly accepted that the training of firemen below the grade of captain is usually the captain's responsibility. Efforts have been made to give instruction to hosemen in habits of housework, drill, first aid, patrol duty and fire duty. Much of this has been exceptionally well done for the reason that individual captains have been good natural teachers, but it has just recently been recognized that *many effective practical fire fighting captains need help, as they are not always proficient in putting over the information, knowledge and skill they have acquired through years of experience on the job.*

One of the greatest contributions President Hoover made to the country during his term of office as Secretary of Commerce, was in the field of standardization and simplification. Many thousands of dollars were saved to the industry and the public by simplifying equipment, processes and methods of manufacturing, as well as standardizing materials. The lack of an adequate training program in Fire Departments the country over, more than any other factor, has practically prohibited the adoption of simplified practice and standardization, more particularly in methods of performance than in the field of equipment.

Attention has been called in the preceding pages to the fact that what progress has been made has developed in apparatus and equipment. Every city has repeatedly "junked" old equipment to adopt something more efficient and effective, but what has been done to improve the man himself, in an organized way, to use this expensive and often complicated equipment and apparatus in the most simple and direct way, with the least lost motion and effort?

Comparison of Old and Newer Methods.

Let us take a moment to compare the advantages of the newer type of training (organized) to the old type (unorganized):

Organized Training

1. Helps the new man make easier adjustment to his job.
2. Reduces the training time.
3. Insures the workers of getting a better understanding and more information of his job.
4. Cuts down and controls accidents.
5. Creates morale in the organization.
6. Aids in determining qualifications for fire service jobs.
7. Aids in preventing waste, both of material and of time.
8. Creates pride in the service.
9. Helps to establish leadership.
10. Promotes cooperation.
11. Promotes correct work habits from the beginning.
12. Insures a definite plan for teaching the job.
13. Better trained for job ahead and aids in promotion.
14. Makes a well-trained, contented and satisfied worker.

Unorganized Training

1. Takes untrained man too long to develop.
2. No standards between stations.
3. Necessitates retraining transferred employees.
4. Compels new trainee to "pick up" language of the job.
5. The new man does not know where or how to obtain information.
6. Promotes lack of interest and "job fear" in the job.
7. Aids in promoting disrespect of superiors.
8. Promotes lack of cooperation.
9. Lacks coordination and encourages non-uniform instruction.
10. Promotes lack of standard practices and contributes to wasteful practices.
11. Everyone has a hand in the training with any kind of method or none.
12. Does not definitely fix responsibility for training.

Organized Training Includes Ability to Teach.

Teaching is at the same time an art and a science. The ability to impart ideas to others is something that can be developed. The degree to which this ability is attained depends on previous training, experience, disposition, personality and intelligence. It might be summed up in the word capacity. No two individuals are alike; individuals have strong points and weak points, and while the vast majority of fire captains have learned their occupation through experience, to accomplish and realize success it is necessary for them also to know the occupation or trade of teaching.

Teaching methods can be applied to the fire service the same as they have been applied in many fields of industrial activity. Officers of every rank in the Army are detailed as instructors at stated intervals and are required to teach younger officers of the reserve corps in the science and art of the soldier. It remains only for firemen generally to develop this phase of their job. No matter how good a natural born teacher you are, a systematic study of this other occupation, teaching, will make for better instruction and for a better Fire Department.

Fig. 1—Modern Fire Fighting Requires Intelligent Action and That Comes Through Efficient Training

Schooling Alone Not Education.

We have somehow become possessed with the idea that education is something to be obtained in school, and school means a place usually conducted by the public, where one can go to obtain information and knowledge from books. It is set up in a regularly organized fashion, in regular steps, beginning with the kindergarten and carrying on through our colleges. The impression has grown up that when we want an education it is necessary for us to attend school, that schooling is the aim and end of education. It was formerly the belief that adults beyond the age of 25 were unable to learn with the same ease in which a younger person seems to absorb knowledge. Thorndike, however, one of the greatest of the world's psychologists, has proved that "age is a minor factor in learning," and that a man 45 years or more of age, all thing being equal, can learn as well or even better than the younger generation. The lack of formal schooling or education, as we call it, is no indication of a person's ability to learn. The fact that he has gained proficiency and promotion in his occupation is proof of the learning ability. Since your knowledge of fire-fighting practice has been learned, you can easily learn other things, even with a limited

amount of schooling. Some of the greatest men of our time—Edison, Ford, Chrysler and many others—had little formal schooling. There is only one real handicap in life and that is of the spirit—the will to do is the essential factor.

Newer Methods More Effective.

The newer methods of training are more effective for the reason that they have been organized according to the principles of learning and teaching. This involves two distinct things—knowing *what to teach,* and knowing *how to teach it.* Since you have in your possession the knowledge of your occupation, it remains for you to organize it so that it can be presented logically and easily, and in addition to that you must develop an understanding and ability in how to put this knowledge over to others effectively.

Knowing What to Teach.

An analysis of your occupation will give you the essential information about your trade or occupation. It is an inventory of the various jobs a fireman must perform arranged in logical order and grouped in divisions of what he does, what he should know, sources of information and methods of instruction While the purpose of the analysis is to inventory the job knowledge and information, it also arranges this subject matter in an orderly systematic outline—a chart to steer by. It contains only the essential jobs that every well-trained fireman has learned through his years of practical experience.

A complete analysis has been developed by the Federal Board for Vocational Education on Fire Fighting. It is perhaps much more complete than any one individual could make it and is most satisfactory, as it has been checked by a number of Fire Departments throughout the United States. Ask for "Fire Fighting," Bulletin No. 155, Trade and Industrial Series No. 44, Federal Board for Vocational Education, Superintendent of Documents, Government Printing Office, Washington, D. C., price 30 cents. This bulletin will really show you how comprehensive your job is and will give you the results of years of experience and training on the job.

Knowing How to Teach.

A good training program also teaches those responsible for the training of their men a way of imparting information to others. Knowing what to teach is one thing; knowing how to teach is another. Vocational Education or training is based on the idea of teaching practical things in a practical way, in other words, "learning through doing." In developing a lesson, one proceeds from the simple to the complex, from the known to the unknown, from the concrete to the abstract, from the practical practice to the principles involved. Its purpose in the fire service is to advance the learner in knowledge, skill and information, and to develop his ability as a fireman with the least amount of energy, danger and time.

What is the Teaching Process?

The teaching process is comparatively simple. There is no sleight-of-hand performance necessary. Anyone can learn it and apply it to some degree at least. It is a well-known fact that we learn through the association of ideas; that is, what we have previously learned through experience becomes an aid in learning new ideas. To illustrate: Suppose your automobile goes off the road and the rear wheel sticks in the mud up to the hub. While you may not have had an experience of this sort before, you know through your past experience that a fence rail or long timber applied as a pry will give purchase enough to lift it out. In addition, there will be other factors involved in getting the car out, but through the association of past experiences with new conditions and experiences, new ideas develop and you have learned one more thing: how to get the rear wheel of an automobile out of the mud. In other words, some previous experience prepares you for the new ideas which you are about to learn.

(1) The first step in the teaching process is to prepare the mind of the learner for the new ideas to be presented. (2) By demonstration, illustration and lecture, the new material is taught; and (3) the learner is given an opportunity to apply the new ideas. (4) As he develops in practice under actual test conditions and gains ability of performance the lesson becomes a part of his experience. Four steps have been taken: (1) the preparation step; (2) the presentation step; (3) the application step; and (4) the test. These are known as the four steps of the teaching process.*

In addition, there is involved the methods of putting over these new ideas, such as demonstrating equipment, illustrating by use of charts, diagrams, slides, moving pictures, photographs and blue prints, by asking questions and by lecture, or by combinations of these methods. A detailed explanation of the instruction process follows in the succeeding chapters.

Summary.

Old methods of training have been and are still unsatisfactory. Some improvement in fire apparatus and equipment has been made, but little has been done to aid the fireman in improving himself.

Attempts to solve the problem have been made by a few departments, some progress made by using textbooks, by having experts lecture on special problems, equipment and apparatus, but on the whole these failed for lack of information and knowledge of how to put over the knowledge possessed to others.

Organized training will give this ability, for it takes all factors into consideration, both from the instructor's viewpoint and from that of the learner, and standardizes not only equipment but simplifies the process of instructing new men.

Schooling alone is not education, although that impression has grown up about us. It is a fact that one can learn even better around 45 years of age than when younger, all things being equal.

Knowing *what to teach,* and *how to teach,* is all there is to this newer kind of training. The *what to teach,* you, as a fire captain already know, that is, you possess the information and knowledge of your trade. We propose to teach you "How to Teach" in this little volume. The four steps of the teaching process are: (1) The Preparation; (2) The Presentation; (3) The Application; and (4) The Test. Learn them, and practice their use. It will repay you many fold, not only in more effective methods, but in the personal satisfaction of accomplishment. Above all, don't give up. Stay with it, and show that you have another brand of courage.

Test on Chapter I.

Try your hand at this easy test—it is called a true-false test, and is based on the material in Chapter I. Mark true statements with a plus sign (+) and false statements with a minus sign (—).

—— 1. Firemen can learn more by self-instruction than by any other method.

*See "The Instructor, The Man, and The Job," by Charles R. Allen, published by J. B. Lippincott Co.

—— 2. A worker can learn by the trial-and-error method.
—— 3. Facts given in well-organized training should be essential to progress.
—— 4. Systematic vocational training has kept up with industrial progress.
—— 5. Textbooks are helpful in self-instruction.
—— 6. There is danger of developing bad work habits through self-instruction.
—— 7. The entire content of usual textbooks has a practical application.
—— 8. A learner can progress on the job through self-instruction as well as under a competent instructor.
—— 9. A worker can learn more by watching others than by being taught properly.
——10. A teaching job should be divided into four steps.
——11. Workers take in too much territory under self-instruction.
——12. The trial-and-error method is the best method for efficiency.
——13. Unorganized training promotes loyalty and cooperation.
——14. Unorganized training is more beneficial than centralized vocational training.
——15. The trained instructor can usually teach better than the journeyman on the job.
——16. School training in large industries is successful.
——17. A weakness of vocational education is that it includes adults to whom learning is difficult.
——18. Anyone who has a thorough knowledge of the trade can teach efficiently.
——19. An instructor should have a well grounded knowledge of his job.

Some Advantages of Organized Training Are:

——20. Workers learn team work.
——21. Takes more time to train them.
——22. They get more information about the job.
——23. They do not waste so much material.
——24. Develops poor work habits.
——25. Furnishes a definite training plan.

In Unorganized Training:

——26. A learner gets definite information about his job.
——27. Gets instruction from a qualified instructor.
——28. Develops speedy promotion.
——29. Develops wasteful habits.
——30. Encourages insubordination.

NOTE—The key to this test will be given in a subsequent issue.

(To be continued)

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Over 1,000,000 Persons Gather in Places of Public Assembly in City and 175 Firemen Are Detailed to Protect These Lives

By William Jerome Daly

FIRE some months ago destroyed the draw curtain on the stage of the Palace Theatre in New York City. Not a fragment of the curtain was left for examination by the Fire Marshal. And while the fire may be of more than passing interest, few realize the precautions taken by the Fire Commissioner to protect lives first, and property second, in places of public amusement.

Approximately 1,000,000 persons daily patronize places of public amusement in New York City. Fire is furthest from their minds. The Fire Department thinks about that for them; consequently there are about twenty-five different things a fireman is required to do when assigned to a theatre as a fire guard.

He must wear a different badge from the one ordinarily worn in the fire house; he must be at the theatre a half hour before the advertised time for opening the show; he must see that all exits, doors, fire escapes, skylights, fire fighting appliances, hose reels, portable extinguishers are in working order; he must send in a telegraphic signal from the special fire alarm box on the stage to make certain that the line of communication is working O.K.; he makes sure that there is water in the fire tank on the roof, he must order the management to remove ice and snow from the fire escapes, court yards, etc.; the "No Smoking" signs on the stage and dressing rooms must be in place; he looks over the carpenter and paint shops of the house; he has to be there in time to see the asbestos curtain raised and that the knife with which to cut the rope to lower it in emergency is in its proper place; he examines articles that have been used for colored lighting effects before they are stored away for the next performance lest they still be hot and likely to ignite something; he makes all performers using lights, fires, blank cartridges, flame pots, etc., show that they have a permit from the Bureau of Fire Prevention; he orders the theatre hands to remove accumulations of rubbish, rope, spare canvas; any drapes lying around are ordered stored away; even the presence of shields on the border lights of the procenium of the stage so that heat radiation from the lights will not start something afire are part of his duty and finally he must be alert and in a position to step to the foot lights himself and "hold" the audience in their seats or calmly ask them to pass out quietly whichever in his judgment is the better thing to do under the circumstances.

Further, the fireman on duty must not ask the management of the theatre for any "Annie Oakleys" (free tickets) for himself, his family or anybody else; his rules tell him that he is there on serious and important public duty and not to talk to members of the cast or to take time out to witness the show himself. When the show is over, he must wait until every person in the audience has departed and witness the lowering of the asbestos curtain. When he returns to his fire house he makes out a report describing his every action taken at the theatre, the time he arrived, etc., and if there were any violations of the law or infractions of Fire Department rules, he must so report in red ink to attract official attention to it at headquarters.

If the theatre is visited during a performance by some fire inspecting officer, or some "gate crashing" fireman or policeman, he is required to obtain the name, rank and badge number of the visitor and whether the visit was official.

Rules as Regards Standing Room

If the show is drawing well at the box office and the management sells standing room, the fireman must see that there is at all times a clearance of six feet between the roped pens for the standees and the rear wall of the orchestra. No standees are allowed at the head of aisles and no standees are permitted under any circumstances in the balconies.

Each night and day of the show season in New York about 175 firemen are drawn away from duty in their stations. The City Charter requires the Fire Commissioner to protect during each performance in a so-called legitimate theatre by assigning members of the uniformed force to attend. In addition to the 175 theatres containing scenery, props, etc., there are 272 so-called "shows," and 227 motion picture houses. The combined seating capacity of the three classifications is 865,081, and, when it remembered that most of the motion picture houses have a daily turnover of several times their capacity, the estimate of 1,000,000 daily patrons of places of public assembly is a conservative figure.

In addition, the Fire Department is required to inspect periodically the fire protection facilities of four concert halls, 429 dance halls, 349 licensed night clubs (not speakeasies); 23 boxing clubs, four sports arenas, three baseball parks, Madison Square Garden and the Colesium in the Bronx, all with a total seating capacity of 793,637 persons, which when added to the theatre and motion picture audiences brings the total of the amusement-loving public up to 1,658,718 persons.

This task of the Fire Department is in the hands of Capt. George J. Foster, commanding officer of the Division of Public Assembly. He knows his Broadway better than some of the columnists who write about it every day. Under Capt. Foster's personal direction, are thirty supervisory inspectors, mostly officers and firemen partially incapacitated from performing fire duty.

Introduction of the Asbestos Curtain

The introduction of the asbestos curtain in theatres in New York City dates back to January 28, 1882, when the Board of Fire Commissioners adopted the recommendation of the late Battalion Chief John J. Bresnan, who made an intensive study of the fatal fire in a Brooklyn theatre December 5, 1876, in which 290 persons were burned to death and the fatal fire in the Ring Theatre in Vienna. Chief Bresnan recommended asbestos clothing for members of the cast, asbestos scenery and curtains and that they be inspected every day. He also is the originator of the scheme to have skylights over all stages. Chief Bresnan was killed at a fire in West 24th street, New York, in 1894 due to a falling roof tank. His death resulted in the present regulations for all roof tanks to be perched on two right angle walls of every building instead of on the roof itself.

What Higher Courts Have to Say Regarding Cases Relating to

Injuries by Fire Apparatus

By LEO T. PARKER
Attorney-at-Law

IT is well established law that a municipality is liable in damages for injuries negligently effected by employees who act within the scope of their employment in departments which are classified as "ministerial." On the other hand, the higher Courts have consistently held that a city is not liable in damages for negligence of its officials or employees who perform governmental functions. The distinction between ministerial and governmental departments is that the latter are operated for the benefit of citizens without payment for such services, whereas ministerial departments are operated for profit to the city.

Various Courts have held that the maintenance of a Fire Department is a public or governmental function, and a municipality will not be liable, unless the state laws so provide, for the wrongful or negligent acts or omissions of the officials or employees in the performance of their duties, either in the actual work of extinguishing fires, or where persons on the public streets are injured by the negligence of firemen driving vehicles employed in the Fire Department.

The reason the higher Courts have consistently held municipalities not liable for injuries to persons, or damages to real property, arising from performance of governmental functions in its Fire Department, is that conduction and maintenance of a Fire Department is of a public character to be exercised in virtue of certain attributes of sovereignty delegated to it for the welfare and protection of its inhabitants. The other function of municipalities relates to special or private corporate purposes, for the accomplishment of which the city acts through agents or servants. In the latter case the city stands upon the same footing with a private corporation, and will be held to the same responsibility with a private corporation for injuries resulting from its negligence, whereas in conduction of a Fire Department the city never is on the same footing or in competition with a private corporation and, therefore, the functions performed are strictly governmental.

For illustration, in the recent case of Moses vs. City and County of Denver, 5 P. (2d) 581, it was shown that a citizen was injured and his automobile destroyed in a collision with a motor vehicle belonging to the Fire Department of the municipality which, at the time, was being driven to a fire. The injured automobile driver filed suit against the city to recover damages alleging that a municipality should be held responsible for injuries effected through negligence of its employees, irrespective whether the injury was effected by employees performing governmental functions. However, this higher Court refused to hold the city liable, and stated the following important law:

"The authorities all hold that a municipality is not liable for the acts of officers or agents of the departments of health, police, or fire, while in the performance of public governmental functions and duties connected with and appertaining to such departments, not upon the theory that the officer is a member of such department, but because the duty performed by him is a public governmental duty. . . . The maintenance and operation of a municipal Fire Department being a governmental function, recent decisions, with some exceptions, sustain the general rule of the earlier cases that no municipal liability arises for negligence in connection therewith."

Subjects Treated in This Article

Operation of Municipal Fire Department is Governmental Function

The Law as to Stop Traffic Light Signals in Relation to Fire Apparatus

City not Bound to Illuminate Streets

Liability of City for Injuries Caused by Vehicle in Its Service

Right to Revoke License to Operate Automobile

Liability for the Moving of a Parked Automobile

Law of Stop Traffic Light Signals

Generally speaking, the higher Courts have upheld the validity of ordinances which require private automobiles to stop near the right hand curb upon hearing a siren of an approaching fire vehicle. However, this law is not applicable with respect to streets on which traffic lights are installed, particularly when the driver of a private automobile is approaching a street intersection having the traffic light open or green.

For instance, in Stone vs. Wood, 157 Atl. 829, it was disclosed that a city ordinance provides that "in case of any alarm of fire" it shall be the duty of drivers of vehicles in a street in which fire apparatus is approaching to move such vehicle, without delay, to the right or left of the center of such street, so as to give free passage to such apparatus.

The facts of this case are that a captain of the Fire Department was going north, riding on a fire truck driven by another, and responding to a still alarm. The driver of a private automobile was driving east. The two vehicles reached the intersection of the streets at nearly the same time and were in collision at a point somewhat east of the center line. This intersection is equipped with an automatic traffic signal, suspended nearly over the point of the collision, of the familiar type showing alternately red and green lights to those approaching. At the time in question, the fire truck was approaching the intersection confronted with a red light in the signal. The driver of the private automobile was approaching from the truck driver's left, but was running on a green light. The fire truck was plainly designated as such, and was equipped with an electric siren and a bell operated by a rope, both of which were sounding.

The private automobile was moving at a rate somewhere between fifteen and forty miles an hour, and the driver never saw or heard the truck until just before the crash. The captain of the Fire Department was seriously injured and sued the driver of the private automobile for damages. It was contended that when the driver of the private automobile heard the fire truck's siren he should have driven to the curb and stopped.

However, on account of the fact that the driver of the private automobile was approaching the street intersection and entered the same when confronted with the green light, the higher Court held the captain not entitled to recover damages, and said:

"The main contention concerned the respective rights of the parties at the intersection of the streets, and how those rights were affected by the 'stop' and 'go' signal referred to. . . . The ordinance had no application to the defendant as he approached the intersection. There was no fire apparatus 'approaching' in the street that the defendant was traveling. So assuming that the siren and bell on the truck were such an 'alarm' as the ordinance contemplated, the ordinance applied to the defendant only after he entered the intersection area, and it was then too late to make compliance with it effective in any way; and his noncompliance did not proximately contribute to the collision."

City Not Bound to Illuminate Streets

The law is well settled that there is no legal duty on the part of a municipality to light its thoroughfares or streets, and it cannot be held responsible for a mere insufficiency of light. Therefore, the failure to exhibit a red light or other signal at a point where an accident might happen because of mere unfamiliarity with the neighborhood on the part of drivers of automobiles is not sufficient to charge a municipality with negligence.

For example, in O'Rourke vs. City of Washington, 155 Atl. 100, an automobile driver sued a municipality for damages on the contention that the officials were negligent in failing to install a red light or danger signal at the approach to a dangerous curve and embankment. This failure on the part of the officials resulted in the driver driving over the embankment and sustaining severe injuries. In holding the city not liable, the Court said:

"It is the duty of one traveling by night to have such a headlight as will enable him to see in advance the face of the highway and to discover grade crossings, or other obstacles in his path, in time for his own safety, and to keep such control of his car as will enable him to stop and avoid obstructions that fall within his vision."

Automobile Used in City's Business

When determining whether a municipality is liable in damages for an injury effected by an automobile, used by an official or employee, the question whether the machine actually is owned by the city is not so important as "Was the automobile being used in city business when the accident occurred?" So held a higher Court in the late case of Wolfe vs. City of Miami, 134 So. 539.

The facts of this case are that city officials gave permission to a city employee to use his own car for city purposes. The car was kept in repair by the city and the fuel to operate it was furnished by the city. One day the city employee loaned the car to a messenger to go on an errand and get some food for certain city employees. The messenger had driven into the city, obtained the food for which he was sent, and was on his way back to the place where the employees were, when he negligently and carelessly ran over a pedestrian. The latter sued the city for damages. The counsel for the city contended that the municipality was not legally responsible because the automobile belonged to the employee. The lower Court held the city not liable, but the higher Court reversed this verdict, saying:

"In the case at bar the car was not owned in its technical sense by the city, but the evidence shows that it was being used by a city employee with the knowledge and consent of the city in the city's business. Repairs and fuel for the car were furnished by the city, and the car itself was actually operated, whether rightfully or not, by the employee. . . . All this was done with the knowledge, consent, and acquiescence of the city and its officials having authority to act for it."

Right to Revoke License to Operate Automobiles

The legislative power to regulate travel over the highways and thoroughfares of the state for the general wel-

New York Fire Chiefs Visit Kenmore

Some of the members of the New York Association of Fire Chiefs who attended the 26th annual convention of that body assembled before Fire Headquarters at Kenmore, N. Y. The convention was held at the Hotel Statler, Buffalo, N. Y., on June 7 to 9, during the convention of New York Mayors' Conference. Chief John W. McCarthy, Corning, N. Y., was elected President; Chief William J. Gates, Glenns Falls, First Vice-President; Chief Joseph L. Murphy, Kingston, Second Vice-President; Ex-Chief R. J. Kirsch, Kenmore, was elected a Director, and Chief James H. Golden, Cohoes, was re-elected Secretary of the Association.

fare is extensive. It may be exercised in any reasonable manner to conserve the safety of travelers and pedestrians. Therefore, since motor vehicles are instruments of potential danger, their registration and the licensing of their operators, and the right to operate them in public places, is not a natural and unrestrained right, but a privilege subject to reasonable regulation under the police power in the interest of the public safety and welfare. In other words, the power of a state or city to issue licenses imports the further power to withhold or to revoke such licenses upon noncompliance by holders thereof with prescribed conditions.

For illustration, in Watson vs. State Division of Motor Vehicles, 298 Pac. 481, it was disclosed that a state law provides that the license for operation of a motor vehicle shall be suspended if the owner or operator of such automobile is sued for damages for an injury inflicted by use of the vehicle and fails to pay a judgment rendered in favor of the injured person. In detail, the statute provides for the suspension of a person's registration certificate and operator's license in the event of his failure, within fifteen days after finality, to discharge every judgment "for damages on account of personal injury, or damages to property in excess of one hundred dollars."

A driver of an automobile, whose license was suspended because he failed to pay a judgment rendered in favor of an injured person, appealed to the higher Court on the contention that the law is void and unconstitutional. However, it is interesting to observe that the higher Court held the law valid and refused to permit the driver to operate an automobile, saying:

"A law that confers equal rights on all citizens of the state, or subjects them to equal burdens, is an equal law. . . . So long as the statute does not permit one to exercise the privilege while refusing it to another of like qualifications, under like conditions and circumstances, it is unobjectionable upon this ground. . . . While the protection of property is all-important, the safety of life and limb is paramount, and therefore the Legislature, in the exercise of the police power, might well provide for the suspension of an operator's license upon his failure to pay any judgment, no matter how small, for damages for personal injuries, while reserving the right to suspend such license for failure to discharge judgments for damages to property only when such judgments are in excess of $100. Such a distinction is reasonable, and does not affect the validity of the law."

Liability for Moving Parked Automobile

Considerable discussion has arisen from time to time whether or not a municipal officer, such as a Fire Department employee, may be liable in damages for moving a parked automobile, where such vehicle is parked in accordance with city ordinances. The recent higher Court case of Vaughn vs. Glenn, 161 S. E. 672, thoroughly discusses this point of the law.

The facts of this case are that the owner of an automobile had lawfully parked it on a public street where it remained for fifteen minutes under authority of a city ordinance which authorized such parking at the time and place at which the vehicle was parked. Without legal right or authority a municipal officer removed the automobile to a storage garage where it was not found by the owner until several weeks later, and then in a damaged condition.

The owner of the automobile sued the municipal officer to recover damages. It was contended that the officer could not be held liable in damages, because in removing the automobile he had acted in accordance with his regular duties as an official.

However, it is important to know that under the circumstances the higher Court held the officer liable, and said:

"If a person, without the consent of the owner or authority of law, removes the personal property of another from the place where the owner left it, and where the owner had the right to leave it, he becomes liable for any damage done it as a consequence thereof."

CORRESPONDENCE

Value of a Booster Pump

To the Editor:

Referring to the article by Chief J. C. Hardesty that appeared in the May issue of FIRE ENGINEERING, he states "the only disadvantage in booster tanks is that when a fire is under-estimated and larger lines are required, it becomes necessary to reel lines that have been used and there is a loss of time in getting apparatus to the hydrant."

We have found that some fires are hard to estimate. In such cases it becomes necessary to use the full booster tank supply.

We have an apparatus equipped with a 200-gallon booster tank, two lines of ¾-inch hose, one ¾-inch hose outlet, two 1½-inch outlets, 2½-inch suction lines and it carries 1,000 feet of 1½-inch hose under built-in seats of the squad type principle. The men ride seated on top of the hose.

With this apparatus, when we arrive at a fire and find that the fire is confined under a roof but is seeping out around the cornice of the entire building, our first men in carry the ¾-inch lines charged from the booster tank. A pumper will drop this truck a line of 2½-inch hose and will take its supply from a hydrant. The 2½-inch line will act as suction. Our booster tank is kept full. We back the ¾-inch lines with two 1½-inch lines and if necessary carry in a third ¾-inch line. The pumper is at the hydrant and by now is connected and ready to go into service at the fire with the standard 2½-inch lines. Once we start operations, we do not have to shut down the booster pump. We also carry 200 feet of 2½-inch hose so we may lay our own feeder line.

We carry a portable four-cylinder pump of the outboard type for use in outlying districts. If we are within a thousand feet of water, the booster tank may be kept charged through a 1½-inch line from the portable pump.

Very truly yours,

J. LLOYD HOPKINS,
Annapolis, Md.

Interested in Fire Protection

To the Editor:

I am President of a real estate company that has been operating in Cleveland for the past thirty years and which has constructed many large buildings in that city.

We carry a large amount of fire insurance and therefore, I am very much interested in modern methods of fighting fires and the prevention of fires. I keep in close touch with the Cleveland Fire Department, and your valued magazine keeps me posted on Fire Department activities in other parts of the country. I certainly get a lot of pleasure in reading all the constructive articles in FIRE ENGINEERING.

Sincerely yours,

SYDNEY S. HARVEY.

Volunteers at Work

To the Editor:

I guess you will be surprised to hear from me in Person: Well, I wish to make a statement on Fire I witnessed on June 15th, 1932 in S——. I was told they have Volinteer Firemen. It was about time they sent some men to teach them to handle some fire. It was real picture for Puck. This was an attic fire. They were getting at it for 25 minutes before they even played a hose on it. They could of put it out with cemmecial and less damage. Some one had to tell them to brake an attic window and put in the water. One got on the roof and started to scratch his head. When they put water in building they started to carry the furniture out. Even had ladder in house and carried the fire ladder out and up to roof before they ever put water in. O! It was fun and made me mad and old fire eater like myself.

Well dear folks be sure and say some thing in that Herald of yours.

Mrs. R. G. F.

—Photo by H. A. Erickson

View of San Diego Looking up Broadway From the Waterfront

Come to San Diego

for the Fire Chiefs' Convention October 18-21

By GEORGE E. COURSER,
Battalion Chief
San Diego Fire Department

WHILE waiting for your next appointment with your Commissioner, thumb idly through your calendar pad. One day follows another with blankless similarity. Monday, Tuesday, Wednesday . . . July, August, September and October.

Should you follow the sound advice of Chief Louis Almgren of San Diego, Cal., October 1 will mean more than the day when the landlord is to be remembered, the piano installment is to be paid or facing the endless bills which have a habit of sneaking in with the mailman. October 1 should bring visions of packing luggage that you will take with you on your grand, scenic, and enjoyable trip to the annual convention of the International Association of Fire Chiefs which will be held in San Diego, Cal., October 18-21.

Chief Almgren who is Chairman of the local Convention Committee, and the officers and men of the San Diego Fire Department are hard at work to see that nothing will be lacking for the comfort and entertainment of the visitors.

A member of the local committee, has written:

"Your entertainment while here will in no way interfere with the business of the convention itself."

San Diego is located in the far southwest corner of the United States and it has many things to offer the visitor that cannot be found elsewhere. It has a land locked harbor of twenty-two square miles. Cool breezes sweeping in from the Pacific make her summers delightfully refreshing while her winters are green and flowery. There are over five hundred points of interest in and around the city.

The park system of San Diego embraces thirty separate areas with a total of 2,600 acres of ground. Its Balboa Park has often been described in periodicals. This park, which has a zoo in which animals live in quarters similar to their natural habitats, comprises 1,400 acres.

Hotel at Agua Caliente, Mexico

San Diego is the birth place of California and the visitor may see the crumbling walls of the military enclosure on Presidio Hill where civilization began on the Pacific slope. In the city may be inspected the first old mission of the state—the San Diego de Alcala, built in 1769.

Besides such points of interest to historians, the United States Naval Training School and

Marine Base is located there. San Diego is the headquarters for the destroyer and submarine squadrons as well as the base for several scout cruisers. Across the bay on North Island is the headquarters for the aircraft squadrons and battle fleet, and the United States Naval Air Station.

But the city offers much more than sea dogs and "battle wagons."

It has many beaches where surf bathing may be enjoyed. There are surf and deep sea fishing for those who love to fight for the fish that they hook. The waters are well stocked with game fish.

Lovers of scenic beauty will find a direct appeal at La Jolla, the beautiful and delightful residential resort.

And who hasn't hear of Agua Caliente? Although "three-horse parlay" or "ten on the nose," may mean nothing to you, a visit to this spot will long be remembered. It is located in Mexico, eighteen miles south of San Diego and is known as America's Deauville. It has an old world atmosphere of languor and splendor plus the comfort and service found in modern America. Agua Caliente is the most elaborate sporting center in the western hemisphere. It has a championship golf course, a mile race track with grandstand and club house, an elaborate swimming pool with medical baths, a casino and a large hotel. The buildings and decorations are in the best Spanish style. Around the grounds are well kept flower beds and shrubbery. Attendants in Mexican costumes, and orchestras playing Spanish music, make Agua Caliente one of the most engaging show places imaginable. En route to and from this sport center, one passes through Tijuana, a border town long famous for its liberal attitude toward life.

In addition to the beauty and charm of the city, California has many attractions to offer. There are five parks in California that are natural recreational centers. The largest parks are the Redwood Park, Big Basin and Humboldt State. Four of the nineteen national parks are located in California.

U. S. Grant Hotel — Convention Headquarters

—Photo by Gabriel Moulin

Carriso Gorge Between San Diego and Imperial Valley

Sequoia National Park, the park of the big trees, covers 386,000 acres. It has numerous sequoia trees twenty to forty feet in diameter and thousands of trees over ten feet in diameter.

General Grant National Park covers 2,500 acres. It was created to preserve the celebrated General Grant tree which is thirty-five feet in diameter.

Yosemite National Park in the Sierra Nevada range spreads over 720,000 acres. It contains the Yosemite Valley and three groves of big trees.

Lassen Volcanic National Park includes 79,000 acres. Its chief points of interest are the hot springs, mud geysers, fantastic lava fields, volcanic cones and Lassen Peak, the only active volcano in the United States. It is 10,577 feet high.

In addition to the national parks in California, several national parks may be visited on the way out to San Diego and on the return trip back home. Much depends upon the route selected. Bryce canyon is located in southwestern Utah, Crater Lake in southwestern Oregon, Glacier in northwestern Montana, Grand Canyon in north central Arizona, Mount Rainier in west central Washington, Yellowstone in northwestern Wyoming, southwestern Montana and northeastern Idaho and Zion Park in southwestern Utah.

A large number of the visitors may prefer to come to San Diego by boat via the Panama Canal. This makes a beautiful trip and one that is different. Should this be the route selected, the first port in the states after a wonderful sea voyage, will be San Diego and the panorama that passes by upon entering San Diego Bay will be remembered for a long time.

The headquarters of the convention will be at the U. S. Grant Hotel located in the heart of the business and theatre district.

According to preliminary plans, the San Diego convention of the International Association of Fire Chiefs promises to be a profitable and eventful one.

Raoul Gauthier Killed at Fire

Chief of Montreal Fire Department and Three Firemen Killed by Second Explosion on Tanker Being Repaired in Drydock

The Late Chief Raoul Gauthier

RAOUL GAUTHIER, head of the Montreal Fire Department, and Director of the International Association of Fire Chiefs, was killed by an explosion, the second of a series that destroyed the tanker S. S. Cymbeline which was lying in the drydock of the Canadian Vickers Company. The casualty list also includes three firemen and twenty-three riveters. It was these workers, trapped in the hold of the ship after the first explosion, that the Fire Department were trying to rescue.

For four weeks the boat had been in the process of repair. Nearly a hundred plates had been re-riveted during that period to repair damage done to the ship when it went aground. Four plates remained to be placed at the stern of the boat. All of the oil tanks had been flushed, cleaned and left open for the escape of gas that might have accumulated.

The first explosion took place at 3 a. m., June 17. Within a few minutes the entire hold of the ship was afire and it was impossible to reach the spot where the workmen were trapped. An alarm was given at the plant and the industrial brigade connected hose lines but the water pressure was insufficient to check the flames that were then visible at the portholes. The Montreal Fire Department was called immediately, and Chief Gauthier, who realized the seriousness of the call, responded with the first companies. A call was sent in for additional apparatus.

All connections to the ship had been broken by the first blast, and there was no means of getting on the craft. A boat's crew from another vessel which was coaling on the opposite side of the basin, took off the men who were caught on the deck of the tanker.

Chief Gauthier was on the catwalk of a section of the dry dock with some of his men, directing the streams of water that were being played on the burning vessel. Just what took place when the second explosion occurred has not been clearly pieced together. Some say the second explosion took place on the ship while others claim that it was in the tanks of the dry dock itself. About fifty yards of the steel plated inner side of the dry dock, weighing many tons was blown up in the air and crashed down about forty yards to one side, partly on the wharf and partly on the dock. The outer sheath of the dock flew up like a piece of paper.

Grease and oil that had accumulated for years on the upper part of the dry dock, were soon abaze.

Firemen rushed to reach the bodies of their comrades who were injured or killed by the blast. Chief Gauthier had disappeared although his helmet was lying on the wharf.

Flames broke out with greater intensity and by five o'clock flames were shooting out of the top of the bridge and the tanker was ablaze from side to side in the center.

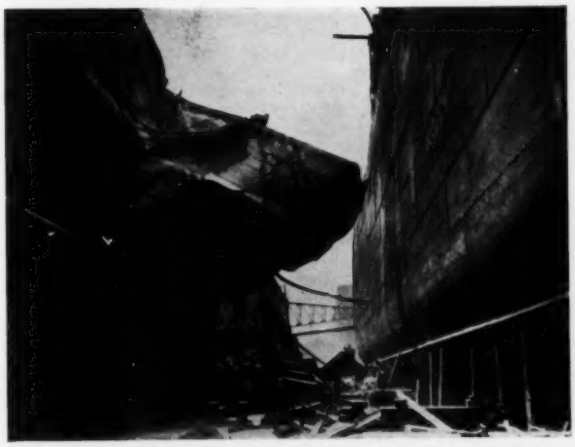
Four days after the explosion, June 21 at 5:30 a. m., the body of Chief Gauthier floated to the surface. It was discovered at a point near where the Chief had disappeared—between the wall of the dry dock and the pier. When found, the Chief's body was fully clothed, except for his helmet, which had been picked up Friday and served as indication that the Chief had perished.

According to a later medical examination at the Coroner's Court, the Chief died from submersion. Indications are that he was knocked unconscious by the explosion and that his heavy clothing with rubber coat and boots, carried him to the bottom of the basin while heavy timbers closed in over him.

Chief Gauthier joined the department on December 22, 1903, and in 1912 was given the rank of Captain. Nine years later he was appointed District Chief for the western section and on July 12, 1923 was Chief of the department. He was given the title Director of the Fire Department in 1928.

During the years that he had served in the Fire Department he was cited several times for bravery. He was one of the firemen decorated with a special medal for bravery shown at a fire in 1910. In 1916 when he was captain he was decorated for saving the lives of a couple overcome by smoke on the fourth floor of a building. Even back in 1905 when he was a fireman for slightly over a year, he saved the lives of five persons employed at a tailoring shop.

About 200,000 persons lined the main streets of Montreal on Wednesday through which the funeral pro-



Wall of the Drydock That Was Blown Outward by the Explosion

The S. S. Cymbaline on which the original fire broke out, is shown at the right. The cover illustration shows the result of the explosion that blew out the inner wall of the drydock. Two large holes were found in the oil tanks on the bed of the floating dock.

cession was to pass to pay their last respects to the Chief and the firemen who lost their lives. The funeral cortège passed from Fire Headquarters to the St. James Cathedral, and thence to the cemetery where services were conducted by Father Oscar Valiquette, Chaplain of the Fire Department. The cortège required one hour to pass.

Ten autos were filled with floral tributes. One floral piece was in the form of a fire alarm box of red carnations bearing the words, "Fire Alarm. Last Call. Box 8121." This was the box from which the fire alarm came in.

Everywhere flags were at half mast. A large part of Bleury Street was a solid mass of humanity. Men and women stood twenty deep at the curb.

Floral tributes were sent by the New England Association of Fire Chiefs, D. W. Brosnan, President, International Association of Fire Chiefs, and Headquarters Office of the International Association of Fire Chiefs.

Director Gauthier is survived by his widow, two sons, and three brothers.

WISCONSIN FIREMEN ATTEND FOURTH ANNUAL STATE SCHOOL

Talk on Grading Cities Extended Due to Popular Demand—Many Papers Presented of Interest to Paid and Volunteer Firemen

FIREMEN from more than 75 Wisconsin cities and villages assembled at the University of Wisconsin, at Madison, June 21 to 24, for the fourth annual firemanship course. The firemen's school was sponsored, as in other years, by the Wisconsin Industrial Commission, the Wisconsin State Firemen's Association, the Wisconsin Paid Firemen's Association, the Wisconsin Association of Fire Chiefs, and the University of Wisconsin Extension Division.

The afternoons on each day were devoted to drills and standard evolutions under the direction of Assistant Chief W. N. Lippold, Milwaukee.

The firemen's "school" opened at Music Hall with Chairman H. E. Pulver, of the University Extension Division, presiding.

The first speaker, C. W. Smith, Director of the Standard Oil Company's safety department, Chicago, extolled Wisconsin's new code for the handling and storage of inflammable liquids as a model for the entire country. The code was worked out by a committee appointed by the Wisconsin Industrial Commission, headed by Judge J. E. Florin, Superintendent of Fire Prevention. Mr. Smith described it as "one of the most complete and satisfactory codes of the kind that has ever been written."

He challenged a common belief that gasoline explodes. If it did, he said, the product could not be used for cleaning or as a fuel. If it could be compared with dynamite, it could not be put safely into the tanks of automobiles. It is the vapors from gasoline, he explained, which when mixed with the right percentage of air, are highly explosive.

City Manager William O'Brien, Kenosha, spoke on "Cooperation between the Fire Department and Other City Departments and Officials."

More property can be saved by proper inspection work than can ever be salvaged during the progress of a fire, or after water and fire have taken their toll of damage, the annual firemanship school was told Wednesday morning by Inspector Richard Widmann, of the Madison department. Mr. Widmann is president of the Wisconsin Paid Firemen's Association.

Chief Otto Hackbarth, Marinette, told the group that about 60 per cent of all fires occur in homes. He said:

"A residence fire is not like many others with which firemen are familiar through frequent visits and inspections, since firemen must practically enter a strange building each time one occurs. The first thing to do at arrival is to think fast and frame your method of attack, locate the seat of the fire and go to work with whatever approach may best suit the nature of the fire and kind of equipment you have. To my way of thinking, there is no one set of rules governing the extinguishment of a residence fire, except that of putting the fire out with the least amount of damage."

He advised that firemen get together after a fire and discuss their mistakes looking to better preparedness for the next fire.

The same subject was discussed by Judge J. E. Florin, Superintendent of Fire Prevention, Wisconsin Industrial Commission.

Chief J. J. Kuplic, Manitowoc, spoke on curbing garage fires. He said it is the policy in his department for the men to get together after a fire and ascertain what mistakes were made and how to correct them in the future.

Chief James C. Lefeber, Wauwatosa, pictured the organization, discipline, and maintenance of Wauwatosa's volunteer Fire Department as an example of economical yet highly effective fire fighting by part-time men, and a highly organized and well equipped department. At first the men were paid $5 per quarter; today they receive $62.50 per month. "There is no reason," he concluded, "why the Fire Department should not be made more of a profession and an institution to be pointed to with pride by the citizens."

V. G. Rutter, engineer for the Fire Insurance Rating bureau, Milwaukee, insisted that absolute discipline should rule in a volunteer Fire Department. Mr. Rutter said:

"Men should not be permitted to choose their own job. The Chief knows what each man is best fitted for. The volunteer Fire Chief has a far greater responsibility than does a paid Chief, since he has no Assistant Chiefs upon whom to rely."

Reduction of public costs came in review when the program of grading cities to determine their insurance class was discussed on the platform and from the floor. The topic was considered of so much importance that when the speaker, Frank R. Daniel, Chief Engineer for the Wisconsin Fire Insurance Rating Bureau, Milwaukee, concluded an hour's discussion there were repeated demands that he continue another 30 minutes.

Mr. Daniel characterized fire insurance as in effect a public tax, with the losses determining the cost. Mr. Daniel continued:

"The classification of a community is an expression of the relative ability to extinguish a fire which has extended beyond the incipient stage. A rating bureau comes to your community and after exhaustive surveys points out the weak spots in your water supply system and in your fire-fighting facilities."

Chief Ben E. Bangerter, Mankato, Minn., talked on the minor fire department equipment needed by departments. He considered in detail a department's accessory equipment, extinguishers, hose and handling devices, protective equipment, entry and access devices, rescue equipment, illuminating devices, salvaging and overhauling equipment, and miscellaneous equipment. He said in part:

"No other trade or profession requires familiarity with a more varied and unrelated assortment of appliances, than those at the disposal of the well equipped fireman. In his kit are to be found the pick and shovel of the laborer alongside first aid mechanisms and materials of the surgeon; implements of the steel worker keeping company with chemically reactive agents of the laboratory; tools of the lineman close to the jimmy of the burglar. No other artisan performing his duties is so often obliged to do the hardest sort of labor under most disagreeable circumstances, and, as such laborer, possess the knowledge necessary to operate certain highly developed devices."

Assistant Chief Tremain, Milwaukee, led a symposium on best methods of cutting and opening doors, windows, partitions, etc.

Clarence Goldsmith, chairman of the Fire Service Extension Committee, Chicago, addressed the meeting on modern methods of fire extinguishment.

Since the major portion of firemen's activities are social, he advocated making the living quarters in the station attractive and convenient as an aid to morale.

Fighting a mercantile fire was discussed by Chief R. H. Drum, Green Bay, with the aid of stereopticon pictures. Chief Drum illustrated the layout, the methods of attack employed, and mistakes made in attacking a serious fire in Green Bay occurring on July 28, 1931. The subject was also discussed by J. E. Florin, Superintendent of Fire Prevention, Industrial Commission.

W. A. Haig, Chief Electrical Inspector, Milwaukee Fire Department, addressed the group on common electrical, fire and life hazards.

Prof. H. E. Pulver, Chairman of the course, reviewed the week's work and outlined what is in mind for the course next year.

A salvage demonstration was directed by Chief Frank Lachenschmidt, of the Milwaukee Fire Insurance Patrol, and the first aid demonstration was in charge of Assistant Chief W. N. Lippold, Milwaukee.

Hydrant Marking, Use of Equipment, Forest Fires and Many Other Topics Discussed at

New England Chiefs' Convention

By HARRY BELKNAP

A TOTAL registration of 638, including active and associate members and guests, signalized the tenth annual convention of the New England Association of Fire Chiefs at Newport, R. I., on June 21 to 24. There was an interesting and instructive program provided, with sessions held in the Exhibit Hall at Newport Beach. The convention headquarters were at the Hotel Viking and the exhibits and demonstrations at Newport Beach.

New Officers Elected

The election of officers at the closing session resulted as follows, all selections being by unanimous vote:

President—Chief Alfred H. Koltonski, Rutland, Vt.
First Vice-President—Chief Daniel B. Tierney, Arlington, Mass.
Second Vice-President—Chief Thomas F. Burns, Bridgeport, Conn.
Secretary-Treasurer—Chief John W. O'Hearn, Watertown, Mass.
Sergeant At Arms—Chief John J. Kennedy, Bryant Electric Co., Bridgeport, Conn.
State Vice-Presidents—Chief J. W. Randlette, Richmond, Me.; Chief Arthur W. Spring, Laconia, N. H.; Chief Carl D. Stockwell, Burlington, Vt.; Chief Frank F. Dickinson, Brockton, Mass.; Chief Daniel F. Young, Cranston, R. I., and Chief A. P. Woodward, Danielson, Conn.

President Koltonski appointed the following as directors: Chief Oliver T. Sanborn of Portland, Me., to fill out the unexpired term of Chief Koltonski, who was elected President, and Chief James M. Casey of Cambridge, Mass., reappointed for another three year term.

The Opening Session

President Lawton called the convention to order for the opening session at 2 o'clock Tuesday afternoon in the Casino at Newport Beach.

On the speakers' stand with Chief Lawton were Secretary-Treasurer John W. O'Hearn, of Watertown, Mass.; Mayor Mortimer A. Sullivan, of Newport; Dr. Horace P. Beck, President of the Newport Chamber of Commerce; the Rev. John B. Lyte, rector of St. George's Church; the Rev. Roy W. Magoun, Superintendent of the Seamen's Church Institute; and the following past presidents of the N. E. Association of Fire Chiefs: Chief John W. Moran, of Hartford, Conn.; Chief Oliver T. Sanborn, of Portland, Me.; Chief William C. Shepard, of Pittsfield, Mass.; Chief Lawrence E. Reif, of New Haven, Conn.; and Chief Selden R. Allen, of Brookline, Mass.

There was a selection by the orchestra, followed by the invocation by the Rev. John B. Lyte. Mayor Sullivan then delivered an address of welcome.

President Horace P. Beck of the Chamber of Commerce, on behalf of that organization, gave a formal welcome before he described in detail the efforts of committees to develop a plan of amusement.

In response, Chief Selden R. Allen of Brookline, Mass., alluded humorously to the previous addresses, and in the same vein to the chiefs, each of whom has the best department in the world. He said in part:

"You can tell a Chief every time, for they have a single-track mind, with its only thought efficiency for their men and machines. Even in their dreams this thought persists, and makes them marked men, never away from their profession in this world, and perhaps in the next. We appreciate your cordial hospitality. You have made us feel that we are not visitors but just folks."

Secretary John W. O'Hearn then read the Roll Call of Members who have died since the last convention. The names were as follows:

Chief Homer J. Mallory, Turner's River F. D., Stamford, Conn.
Ex-Chief H. M. Martin, Enosburg, Vt.
James A. Hooben, Taunton, Mass.
Ex-Chief Daniel E. Johnson, Bridgeport, Conn.
C. Gilbert Towne, Needham Heights, Mass.
Chief John T. Coneeny, The Dupont Co., Wilmington, Del.
Chief John R. Fleming, Saylesville, R. I.
Irving F. Labensky, City Electrician, New London, Conn.
Chief Henry A. Brown, Marlboro, Mass.
District Chief C. David Gale, Orange, Mass.
Chief Andrew T. Doran, Greenfield, Mass.
William H. Lewis, Fabric Fire Hose Co., Worcester, Mass.
Ex-Chief Chester H. Blethen, Auburn, Me.
Chief Henry J. Hyatt, Fitchburg, Mass.
Leonard Furgang, Boston, Mass.
Chief Charles H. Fuller, Pawtucket, R. I.

The memorial address by Rev. Roy W. Magoun, Superintendent of the Seamen's Church Institute, was partly as follows:

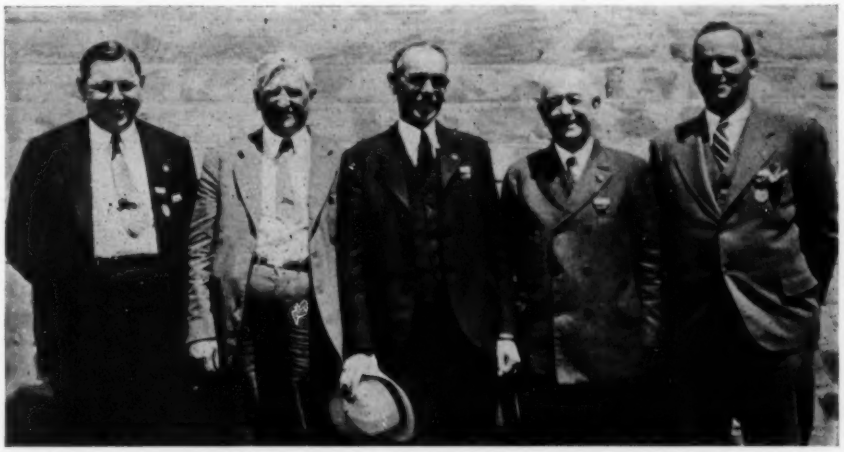
"Those whom we hold in sacred remembrance today live well because, in addition to the happy qualities of friendliness and fraternal affection, they were engaged in a profession which is known and recognized everywhere because of its consecration to the task of saving life and property, and whose activities prescribe that for all its members duty and danger mean one and the same thing.

"Happily indeed are those who have trod this broad highway of service and sacrifice, and whatever note of sadness there may be of their passing must be lost in the overtone of thankfulness for the method and manner of their life's work. We know that the wise and loving God, who watches over our going out and our coming in, has in His holy keeping all those whom we have loved and lost for a little while."

At the conclusion of this memorial the gathering stood in silence while "Taps," the bugle call, marked the completion of duty and the entering on the roll of honor of the deceased chiefs' names. Congdon's society orchestra which supplied the music for the convention, played "Auld Lang Syne."

Chief Tierney's Tribute

A resolution and tribute to his deceased fellows was read by Chief Daniel B. Tierney, who commended their action



Officers of the New England Association of Fire Chiefs

Left to right—Chief Alfred H. Koltonski, Rutland, Vt., President; Chief Daniel B. Tierney, Arlington, Mass., First Vice-Pres.; Chief John W. O'Hearn, Watertown, Mass., Sec'y-Treas.; Chief James M. Casey, Cambridge, Mass., Director; Chief Oliver T. Sanborn, Portland, Me., Director.

Some of the Well-Known Regulars Who Never Miss a New England Convention

Left to right—Chief Charles L. McCarthy, Worcester, Mass.; Capt. John H. Day, Lynn, Mass.; Chief W. C. Mahoney, Peabody, Mass.; Chief John C. Moran, Hartford, Conn.; Chief Lawrence E. Reif, New Haven, Conn.; W. C. Gibson, FIRE ENGINEERING, New York; Chief Oliver T. Sanborn, Portland, Me.; Chief Selden R. Allen, Brookline, Mass.; Harry Lovell, Portland, Me.

and service, and expressed sympathy to their family and loved ones, who suffer the greatest loss.

The benediction was pronounced by Rev. Mr. Lyte, after President Lawton had called attention to the program and urged a hearty support of its activities.

All New England Team Wins Base Ball Game

At 6 p.m. there was a baseball game between the Fall River Fire Department Team and an All New England Firemen's Team. The latter won by the score of 15 runs to 6 in a heavy hitting contest. The line up was as follows:

Fall River

P.	Joe Golden	Former New England League twirler
P.	Tom Kennedy	Fall River Legion and Oaks
C.	Joe Cyr	Cape Cod League
1 b.	Homer Delisle	New England Oil
2 b.	Dick McAndrews	Fall River Hylands
3 b.	Joe Devine	Fall River Legion and Oaks
lf.	Lieutenant Mellon	Fall River Border Citys
cf.	Dick Gangswitch	Suburban League
rf.	Joe Crofton	Cape Cod League
Subs.	Joe Alty	Fall River City League
	Jack Fahey	Fall River City League
	Jim Sullivan	Foster Winchesters
Mgr.	Captain Lough	Fall River N. E. League

All New England

Mgr.	Chief William Hill		Belmont, Mass.
C.	Arthur Reardon	Engine 21	Boston Fire Dept.
2 b.	John Sullivan	Ladder 2	Taunton Fire Dept.
	Former New England League Player		
cf.	Henry Eagan	Engine 26	Boston Fire Dept.
lf.	Frank Sousa	Bristol, R. I. Eveready Fire Co.	
3 b.	Eddie Burke	Engine 9	Cambridge Fire Dept.
	Former Toronto International League Player		
1 b.	Billy Bull	Engine 4, Call man	Newport, R. I.
rf.	Al. Leach	Engine 1	Providence, R. I.
	Former Eastern League Player		
ss.	George Butler	Engine 1	Newport, R. I.
P.	Jake Spitz	Engine 35	Boston Fire Dept.
	Boston Twilight League Player		
Subs.	Mike Lyne	Ladder 1	Newport, R. I.
	Bill Murphy	Ladder 17	Boston, Mass.
	Lieut. Collins	Ladder 2	Cambridge, Mass.
	William Baker	Engine 3	Belmont, Mass.
	George Smith	Engine 33	Providence, R. I.

A tour of inspection was made to the handsome new brick fire headquarters building of the Newport Fire Department. On the main floor were a motor pumping engine, combination hose wagon, aerial hook and ladder truck, and city service ladder truck of the Newport Fire Department, also the 85 ft. Mack aerial truck on exhibition at the convention.

The second floor contains Chief Lawton's office and bedroom with connecting bath; three spacious dormitories; large smoking room, cedar closets, steel lockers, shower baths and toilets, kitchenette and dining room with electric refrigerator and gas range, officer's rooms, and supply closet. In the rear of the first floor is the Gamewell fire alarm system located in a separate division of the building.

In the evening there was a whist at the Hotel Viking, followed by a buffet supper. The whist was arranged by a special committee composed of Mrs. William T. Bull, Mrs. Joseph Kirwin, Mrs. Samuel W. Marsh, Mrs. Gustav Stenholm, and Mrs. Oliver Cushman. The principal prize was won by Mrs. Mellen R. Joy, wife of Chief Mellen R. Joy, of Saugus, Mass.

Wednesday Morning Session

The Wednesday morning session was held at the Newport Beach Casino, starting at 9:30. The first business was the reading by Secretary O'Hearn of the minutes of the meetings of the Board of Directors during the year. This was followed by the Secretary-Treasurer's report which showed a total membership of 746. Chief O'Hearn, in his report showed that:

During the past year we have lost an unusual number of members by death, a total of 17. We have not shown the same steady financial increase the past year as in previous years due to a number of causes. First of all we were called upon to finance the cost of the exhibition hall for our Boston Convention, amounting to $2,400. This is the first time we were obliged to do this, but in order to make the convention a success and because of insufficient funds being provided by the City of Boston, we were called upon to pay the bill. Our receipts from our advertising program have been reduced considerable due no doubt to economic conditions and to fradulent soliciting of advertising in the name of the association.

Early in January of 1932 some persons started soliciting among our advertisers and were not discovered until March. Considerable money was collected by them before discovery and naturally we were deprived of this advertising when we approached our prospects. Prosecution was started at once and due to the efficiency of special officer Wm. J. Condon of Boston Police Department, we were able to get a conviction which carried a jail sentence.

Prospects do not look very bright for any great financial gain during the coming year as the directors in their judgment deemed it best not to make any charge for exhibition space this year, to those exhibitors who have shown with us for five years, in appreciation for their continued support. We, like all other organizations, are also commencing to feel the crisis the country is passing through. . . .

In the ten years we have been operating we have never been called upon, or found it necessary, to draw on our savings for any purpose.

Our peak year for earnings appears to have been 1930-1931 when we netted $3,828.31, with only a gain of $696.95 for 1931-1932, due to causes already stated. During the past ten years we have averaged earnings of a little better than $2,000 each year. Our membership has increased from 179 at our first convention in Bridgeport to 746 at the present time.

On June 20, 1931, the total membership was 715. Since that date we have admitted to membership 81 new members, we have lost by death 17 members and 33 members have been dropped for non-payment of dues, or have resigned.

Figures Who Were Very Much in Evidence at the Newport Convention

Dep. Chief Thos. F. Dougherty of N. Y., who made two extremely interesting talks at the convention.

Left—Chief J. W. Barker, Middletown, R. I., who handled the exhibits, and (right) Billy Bull, of Newport, who assisted in the entertainment. Each did a fine job.

Chief W. C. Green, Concord, N. H., who next month completes his fiftieth year as a fire fighter.

Chief Carl Stockwell of Burlington, Vt., enjoyed it all with his wife and son. He even brought along his famous whistle.

The total membership on June 20, 1932 is 746, classified by States as follows:

Maine	43	District of Columbia	1
New Hampshire	41	Illinois	1
Vermont	39	Louisiana	1
Massachusetts	401	New Jersey	1
Rhode Island	55	New York	29
Connecticut	128	Ohio	3
California	1	Pennsylvania	2

On June 15, 1931 the cash balance was $19,792.92.
On June 20, 1932 the cash balance was $20,489.87. $812.04 of this amount is deposited in the Union Market National Bank, Checking Acct., Watertown, Mass., and $10,623.74 in the Savings Department of the same bank. The balance $9,054.09 is deposited in the Watertown Co-operative Bank.

. . .

Chief Alfred H. Koltonski, of Rutland, Vt., reported for the auditing committee.

Secretary O'Hearn then read some correspondence including a letter from Chief Patrick J. Hurley, of Holyoke, Mass., written from the hospital where he is recuperating from injuries received in a motor accident while responding to an alarm of fire. He expressed his regret at not being able to attend the convention and thanked the association for the flowers that were sent to him in the hospital.

Letters were also read from Frank E. Taft, of the Seagrave Corporation; from Chief William F. Noble, of New Britain, Conn.; and from Fred Shepperd, Managing Editor of FIRE ENGINEERING.

Secretary O'Hearn announced plans and rates for the trip to San Diego, Cal., for the convention of the International Association of Fire Chiefs.

Uniform Marking of Fire Hydrants

The first paper on the program was by Chief J. W. Randlette, of Richmond, Me., on "Uniform Marking of Fire Hydrants."

The speaker pointed out the importance of the subject to both Fire and Water Department officials. He said that conflagrations had resulted from a shortage of water. In such cases he asked was it due to inadequate mains or an insufficient supply and was it the fault of the water officials or of the Fire Chief? He told of trouble caused by use of powerful motor pumpers on dead end hydrants and of the Water Department being in ignorance of the capacity of the engines. He declared that each department has distinct duties in connection with fire service and must work in co-operation. The Water Department should make flow tests and keep a record of the water capacity of each hydrant. Some hydrants have an adequate flow and others are located on dead end mains. Because of this a distinctive method of marking hydrants is needed to denote their capacity at a glance. A uniform method that is both simple and effectual should be devised, Chief Randlette said.

He then described the system adopted by the Maine Water Utilities Association, which paints the barrel of all hydrants chrome yellow and then divides the hydrants into three classes, A., B., and C. The A class hydrants, having a capacity sufficient for one or more 1,000-gallon pumpers are given a green top and nozzle tip; the B Class hydrants with capacity for one or more 500-gallon pumpers are given an orange top; and the Class C hydrants with an insufficient capacity for a 500-gallon pumper are painted with a red top.

At the conclusion of his paper Chief Randlette offered the following resolution:

At a meeting of the Maine Water Utilities Association held in Portland March 22, 1932, it was voted that the Committee on the Marking of Fire Hydrants of this association present to the New England Association of Fire Chiefs the following resolutions:

Whereas, it has been established that great benefit accrues to both the Water Department and Fire Department to have fire hydrants marked to indicate their capacity, and

Whereas, we believe that the time has arrived when steps should be taken toward a national uniform method of marking fire hydrants, and

Whereas, this association in 1929 adopted a system for marking fire hydrants in the State of Maine, therefore be it

Resolved, that the New England Association of Fire Chiefs be asked to give the subject consideration, and, if deemed advisable, that action be taken toward a uniform method of marking fire hydrants, and that the International Association of Fire Chiefs be asked to make the method national.

James W. Graham, Gen. Mgr. Portland Water Dist.
A. W. Read, Supt. Bangor Water Dept.
Earle A. Tarr, Supt. Winthrop Water Dist.
Walter F. Abbott, Supt. Bath Water Dist.
Sidney S. Anthony, Supt. Augusta Water Dist.
Samuel D. Soule, Supt. Gardiner Water Dist.
J. W. Randlette, Supt. Richmond Water Works.
Hydrant Committee, Maine Water Utilities Association.

The resolution was discussed by Chief Oliver T. Sanborn, of Portland, Me.; Chief Selden R. Allen, of Brookline, Mass.; Chief Daniel B. Tierney, of Arlington, Mass.; Chief Joseph S. Lawton, of Newport; and Chief Lawrence E. Reif, of New Haven, Conn. Chief Sanborn stated that he thought the pressure should be indicated on the hydrant. Upon motion by Chief Reif it was voted to have the President appoint a committee to consider the matter and bring in a report at the next meeting of the association.

President Lawton appointed a committee composed of Chief J. W. Randlette, Richmond, Me.; Chief Selden R. Allen, of Brookline, Mass.; and Chief Alfred H. Koltonski, of Rutland, Vt.

Practical Use of Fire Department Equipment

The second paper was by C. W. Mowry, Manager of the Inspection Department of the Associated Factory Mutual Fire Insurance Companies, on "The Practical Use of Private Fire Equipment."

The talk was illustrated by lantern slide views of the fires in the Cocheco Mills, the Buffalo Armory, the Ford Motor Company, Chester, Pa.; the Pocasset Mill, Fall River, Mass.; the Farr Alpaca Mill, Holyoke, Mass.; a mill and lumber shed in Pawtucket, R. I.; an unsprinklered rug factory in Paterson, N. J.; and the huge pile of pulp wood recently burned in the Province of Quebec.

Mr. Mowry described the development of mill fire protection and the introduction of the perforated pipe system. He told of the various types of automatic sprinklers and of the need for co-operation between plant fire brigades and city Fire Departments. He also showed a diagram of the cost of insurance and of its decrease since the installation of sprinklers.

Value of Fire Department Drill School

The next paper was by Battalion Chief Thomas O'Connor, of the District of Columbia Fire Department, Washing-

The New England Chiefs Showed Considerable Interest in the Demonstrations

Left—Several small forest fire pumps at work. The onlookers included many fire wardens.

Right—In background is the tent which housed the display of motor fire apparatus. (Photo by R. W. Hetzel.)

ton, D. C., on "The Value of the Fire Department Drill School."

He described the 30 days course of training of Washington firemen and gave the dimensions of the drill tower used. This is a 65 ft. tower built of brick and steel and equipped with a standpipe. There is a small house for demonstrating the principle of correct ventilation and there is a class room equipped with samples of all the various fire tools and appliances. The classes are composed of from 15 to 20 men.

President Lawton announced the appointment of P. Hildreth Parker, George W. Austin, and Herbert K. Pratt, of the Box 52 Association of Boston, as a Committee on Registrations and of the appointment of Chief David A. DeCourcey, of Winchester, Mass.; Chief F. R. Gisborne, of Sound Beach, Conn.; and Chief Fred A. Hutchinson, of White River Junction, Vt., as a Committee on Courtesies.

The "Why" of Fire Prevention

The next paper was by Alfred N. Miner, Vice-President of the Massachusetts Safety Council, on "The 'Why' of Fire Prevention." Mr. Miner deplored the indifference of the public to fire prevention and declared that fire waste is a sheer loss, causing disaster and distress. He gave figures on the yearly loss which he said amounted to $501,980,000 in America in 1930 and to $464,000,000 in 1931. He declared that about 10,000 persons are killed every year by fire and 25,000 injured. He said that in Massachusetts 52 per cent of the fires are in dwellings and recommended a periodic inspection by firemen of all dwellings as well as inspection of business establishments. He said that in Europe the annual fire loss was only 33 cents per capita compared to $4 per capita in America.

Mr. Miner declared that the movement for retrenchment in municipal expenditures leading to cuts in Fire Department personnel and apparatus or failure to purchase new equipment must be vigorously fought. He pointed out the hazard caused by smoking in theatres which is permitted in some cities.

Model Arson Law

In closing he called attention to the model law recently passed by the Massachusetts legislature and signed by Governor Joseph B. Ely. This bill which was endorsed by the Fire Chiefs' Club of Massachusetts is as follows:

Section 1. Chapter two hundred and sixty-six of the General Laws, as amended in section one by chapter three hundred and eighty-two of the acts of nineteen hundred and thirty, is hereby further amended by striking out said section and inserting in place thereof the following:

Section 1. Whoever wilfully and maliciously sets fire to, burns, or causes to be burned, or whoever aids, counsels or procures the burning of, a dwelling house, or a building adjoining or adjacent to a dwelling house, or a building by the burning whereof a dwelling house is burned, whether such dwelling house or other building is the property of himself or another and whether the same is occupied or unoccupied, shall be punished by imprisonment in the state prison for not more than twenty years. The words "dwelling house," as used in this section, shall mean and include all buildings used as dwellings such as apartment houses, tenement houses, hotels, boarding houses, dormitories, hospitals, institutions, sanatoria, or other buildings where persons are domiciled.

Section 2. Said chapter two hundred and sixty-six is hereby further amended by striking out section two and inserting in place thereof the following:

Section 2. Whoever wilfully and maliciously sets fire to, burns, or causes to be burned, or whoever aids, counsels or procures the burning of, a meeting house, church, court house, town house, college, academy, jail or other building which has been erected for public use, or a banking house, warehouse, store, manufactory, mill, barn, stable, shop, outhouse or other building, or an office building, lumber yard, ship, vessel, street car or railway car, or a bridge, lock, dam, flume, tank, or any building or structure or contents thereof, not included or described in the preceding section, whether the same is the property of himself or of another and whether occupied, unoccupied or vacant, shall be punished by imprisonment in the state prison for not more than ten years.

Section 3. Sections three and four of said chapter two hundred and sixty-six are hereby repealed.

Section 4. Said chapter two hundred and sixty-six is hereby further amended by striking out section five and inserting in place thereof the following:

Section 5. Whoever wilfully and maliciously sets fire to, or burns or otherwise destroys or injures by burning, or causes to be burned or otherwise so destroyed or injured, or whoever aids, counsels or procures the burning of, a pile or parcel of wood, boards, timber or other lumber, or any fence, bars or gate, or a stack of grain, hay or other vegetable product, or any vegetable product severed from the soil and not stacked, or any standing tree, grain, grass or other standing product of the soil, or the soil itself, or any personal property of whatsoever class or character exceeding a value of twenty-five dollars, of another, or any boat, motor vehicle as defined in section one of chapter ninety, or other conveyance, whether of himself or another, shall be punished by imprisonment in the state prison for not more than three years, or by a fine of not more than five hundred dollars and imprisonment in a jail or house of correction for not more than one year.

Section 5. Said chapter two hundred and sixty-six is hereby further amended by striking out section six and inserting in place thereof the following:

Section 6. Whoever wilfully and maliciously attempts to set fire to, or attempts to burn, or aids, counsels or assists in such an attempt to set fire to or burn, any of the buildings, structures or property mentioned in the foregoing sections, or whoever commits any act preliminary thereto or in furtherance thereof, shall be punished by imprisonment in a jail or house of correction for not more than two and one half years or by a fine of not more than one thousand dollars.

The placing or distributing of any flammable, explosive or combustible material or substance or any device in or against any building, structure or property mentioned in the foregoing sections in an arrangement or preparation with intent eventually to wilfully and maliciously set fire to or burn such building, structure or property, or to procure the setting fire to or burning of the same shall, for the purposes of this section, constitute an attempt to burn such building, structure or property.

Section 6. Said chapter two hundred and sixty-six is hereby further amended by striking out section eight and inserting in place thereof the following:

Section 8. Whoever wilfully, maliciously or without reasonable care sets or increases a fire upon land of another whereby the property of another is injured, or whoever negligently or wilfully suffers any fire upon his own land to extend beyond the limits thereof, whereby the woods or property of another are injured, shall be punished by a fine of not more than five hundred dollars or by imprisonment for not more than one year.

Section 7. Said chapter two hundred and sixty-six is hereby further amended by striking out section ten and inserting in place thereof the following:

Section 10. Whoever, wilfully and with intent to defraud or injure the insurer, sets fire to, or attempts to set fire to, or whoever causes to be burned, or whoever aids, counsels or procures the burning of, a building, or any goods, wares, merchandise or other chattels, belonging to himself or another, and which are at the time insured against loss or damage by fire, shall be punished by imprisonment in the state prison for not more than five years or in a jail or house of correction for not more than two and one half years.

Assistant Chief Dougherty, New York, Speaks

Assistant Chief Thomas F. Dougherty, of the New York Fire Department, was the next speaker on the program. He told of his experiences in fighting the recent Cunard Dock fire in Manhattan and declared that the criticism of the New York Fire Department contained in the report issued by the

Members, Associates and Guests in Attendance at the Tenth Annual Convention of the New En

New York Board of Fire Underwriters was unjust and uncalled for. He also described a new kind of refrigerant recently placed on the market and told of the hazards of mechanical refrigeration. The Chief told of some experiences with gasoline fires and ended his talk with a tribute to the memory of the late Chief Gauthier, of Montreal, who was killed in the explosion on the oil tanker "Cymbeline" while directing his men in fighting the fire.

Charles "Sandy" Chapman, of the Gamewell Company, spoke briefly and extended greetings from Chief Smith, of Pittsburgh, Pa. He complimented the forest fire wardens' associations for the excellent work which they are doing in New England.

The last speaker of the morning was H. L. Bond, of the National Fire Protection Association, of Boston. He emphasized the importance of fire prevention and of investigation into the causes of all fires, especially during periods of business depression when suspicious fires are on the increase.

In the afternoon there was a sight seeing trip by motor cars to the famous Ocean Drive, Fort Adams, the Coast Guard Station, Swiss Village on the estate of Commodore Arthur Curtiss James, estate of State Senator and Mrs. William H. Vanderbilt, "Oakland Farm"; and the estate of Mrs. Moses Taylor, "Glen Farm." In the evening there was dancing at the Hotel Viking. The old Newport hand tub "Hercules" was taken to the beach and a demonstration of the old machine showed that it was still in working order.

Thursday Forest Fire Day

Thursday was "Forest Fire Prevention and Extinguishment Day" with the program under direction of the Forestry Departments of Rhode Island and Massachusetts.

Chief Joseph S. Lawton, of Newport, called the convention to order at 10:30 a.m. Those on the speakers' platform besides President Lawton were Secretary-Treasurer John W. O'Hearn, of Watertown, Mass.; Maxwell C. Hutchins, State Forest Fire Warden of Massachusetts; Harold C. Cook, Chief Forester, Department of Conservation, Massachusetts; A. W. Hurford, Associate Forester, Rhode Island Department of Agriculture; Austin F. Hawes, Connecticut State Forester; A. B. Hastings, Chief of State Co-operation, Washington, D. C.; and Kinne F. Williams, Supervisor of Forest Fire Control, Conservation Department, Albany, N. Y.

The hall was well filled as an address of welcome was delivered by the first speaker of the day, A. W. Hurford, Associate Forester, Providence, R. I.

The second speaker was Austin F. Hawes, of Hartford, Conn., who acted as Chairman of the session and introduced the various speakers.

"The more co-operation there is between the forest wardens and the city and town Fire Chiefs the better the situation will be" said Mr. Hawes.

He pointed out the grass and brush fires which occur every fall and spring on the outskirts of municipalities and which often damage houses and spread into the woodlands.

"There are 27,000,000 acres of forest land in the New England States alone which need protection from fires. Two thirds of this area are composed of second growth timber and brush land and one third is old growth. There are about 3,640 forest fires every year in New England and the average number of acres burned per fire is 26. Last year the total number of acres burned was 95,000 in New England."

Mr. Hawes said that there was an increasing use made of water in forest fire supression and that the modern portable power pumps were playing a large part in keeping down the damage from woods fires.

Cooperative Forest Fire Control

The third speaker was A. B. Hastings, of Washington, D. C., who took as his topic "Co-Operative Forest Fire Control." He told of the co-operative efforts that are being made to protect the public and private forest lands of the United States from fire. He said that there are 417,000,000 acres in need of systematic organized protection against fire, this area not including the national forest, national parks, and Indian reservations.

Lightning is the cause of 63 per cent of the forest fires in the Rocky Mountain area, the speaker said, but in New England lightning plays an insignificant part as the cause of fires. Careless smokers, burning brush, and other causes are the more frequent origin of forest fires in the northeastern section of the country. He told of three-fold cooperation between the federal forest service, the state conservation departments, and private land owners. In 1931 there were 187,000 forest fires in America and more than 51,000,000 acres were burned over. An interesting talk on "Weather and Its Relation to Forest Fires" was given by E. B. Rideout, Radio Weather Forecaster of Station WEEI, of Boston, Mass. The speaker declared that weather conditions played an important part in determining the probability of forest fires and that periods of drought and low humidity made the forests a veritable tinder box. He said that on some occasions the percentage of humidity in the New England area was as low as in a desert. He described the formations of low pressure areas, the development of storms, movements of thunder showers, prevailing winds at various seasons, and gave other weather data.

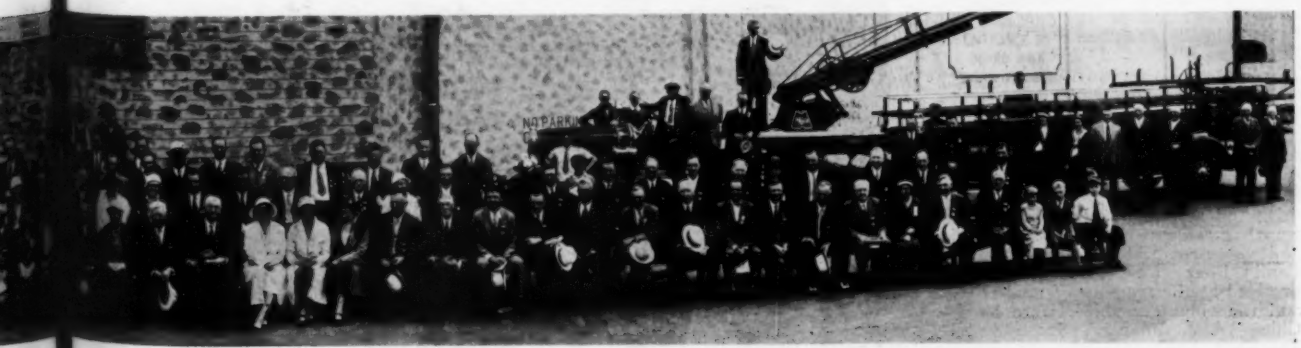
Forest Fire Damage in New England

Harold O. Cook, Chief Forester of Massachusetts, read a paper on the subject "Forest Fire Damage in New England." He said that the making out of detailed forest fires reports is distasteful to many wardens, but that these reports have a very practical value. He said the statistics of the number of fires, acreage burned, and average number of acres burned per fire are of use in compiling reports and for reference. He said that weather conditions are largely responsible for the variation in the annual number of fires.

Formerly the railroads were responsible for from 25 to 35 per cent of the wood fires, but now fires from this cause have been greatly reduced. The speaker stressed the importance of getting men and tools to the scene of a fire quickly and of extinguishing the fires while they are small and confined to a limited area. In estimating the acreage burned he said wardens often over-estimated the area burned in large fires and under-estimated the area covered by smaller fires. He told of tables that give the value of different wood at various stages of growth and told of methods of estimating the loss in cords of wood.

Development in Forest Fire Equipment

The last speaker on the program at this session was Kinne F. Williams, Supervisor of Forest Fire Control, New York State Department of Conservation, Albany, N. Y. His subject was: "Development in Forest Fire Fighting Equipment." He pointed out that the normal equipment of



...ion of Fire Chiefs, Assembled in Front of the Convention Exhibit Hall, at Newport Beach, R. I.

city fire apparatus is unsuited for combatting forest fires and that specialized apparatus is needed.

He pointed out the need of forest wardens and fire fighters in rural sections acquiring a knowledge of the location of brooks, ponds, and other sources of water supply. He described various tools used in forest fire work and praised the development of specialized units, portable gasoline pumps, knapsack hand pumps, and other equipment. He mentioned the value of airplane patrol and observation towers and said that although the system of detecting outbreaks of fires in the woods had been greatly improved, the work of suppression still left much to be desired and that fires spread over large areas before a sufficient force of men and apparatus can be assembled.

Mr. Williams said that power pumps of the rotary, centrifugal, and piston types were now available and were made in sizes ranging in weight from 40 pounds to 300 pounds. He said that water is now recognized as being preeminent in forest fire extinguishment. He predicted that the 4-cycle type of pumping engine would gradually replace the 2-cycle type. He told of good results obtained from tank trucks carrying men, tools, pump cans, and other equipment and of the advantages in cutting fire lanes. He advocated use of self-contained units and of light trucks which could be used to dispatch men quickly to the scene of fires. He told of the value of tractor plows and said that the manufacturers are co-operating with federal and state forestry officials in designing and developing new and improved apparatus.

In closing the session Maxwell C. Hutchins, Massachusetts State Forest Fire Warden, thanked the speakers for their excellent papers and said that he was gratified at the large attendance. He invited all those present to attend the demonstration in the afternoon.

(Report of convention continued next issue)

OHIO FIRE CHIEFS' ASSOCIATION HOLD CONVENTION IN HAMILTON

T. Alfred Fleming is Main Speaker at Annual Banquet—Paid Chiefs and Heads of Volunteer Departments Have Separate Sessions

By R. B. Criswell

A PARADE headed by the Dayton Firemen's Band, and which followed a route from the hotel Anthony Wayne to convention headquarters, opened the fifteenth annual convention of the Fire Chiefs' Association of Ohio held at Hamilton, June 7-9. The convention was called to order by President Edward J. Green of Steubenville. Chief McFarland of Marion responded to the addresses of welcome. The memorial address was delivered by District Chief Joseph Kirby of Dayton. The President's annual address and the appointment of committees, concluded the morning session

The following papers were presented at the afternoon session: "Future Trends for Municipal Fire Service," by John B. Blanford, Director of Safety, Cincinnati; "Taming the Fire Demon," by Richard E. Vernor, Manager, Fire Prevention Department, Western Actuarial Bureau, Chicago; "Fire Alarms and What They Mean to a Municipality and Fire Departments," by A. R. Welton, District Manager, The Gamewell Company. Chief Harry Callan, of Youngstown, led a discussion on arson cases.

In the evening a special program was given at the Paramount Theatre. Motion pictures of special interest to firemen, were shown.

On the second day there were sectional meetings of interest to paid and volunteer Chiefs. Chief William Conlin, First Vice-President, Hamilton, presided at the meeting of paid chiefs, and the volunteer chiefs were led by Chief W. J. Pflanzer, Second Vice-President, Lebanon.

Members of the Cincinnati Salvage Corps gave demonstrations in the afternoon under the direction of Captain Edward J. Adler. They performed evolutions of live saving, ladder raising; and there were exhibitions by manufacturers. A new style of apparatus for fighting rural fires was shown.

The annual banquet was held in the evening with R. P. Price, City Manager of Hamilton, serving as toastmaster. T. Alfred Fleming, Supervisor of the Department of Conservation, National Board of Fire Underwriters, was the principal speaker. Dancing followed.

Election of officers was held at the final session. The new officers are President, Chief William Conlin, Hamilton; First Vice-President, Chief Frank May, Mansfield; Second Vice-President, Chief Henry Schultz, Ashland; Secretary-Treasurer, Chief Philip J. Harty, Youngstown Sheet & Tube Company.

The next convention will be held in Mansfield.

Newly Elected Chiefs

The following have been elected to head the Fire Departments in the respective municipalities:

Friendship, N. Y.—Leslie L. LeSuer
Sleepy Eye, Minn.—Andrew Zwaschka
Tappan, N. Y.—Peter Keller
Chippewa Falls, Wis.—Thomas Farnsworth
Delavan, Wis.—Henry Gardner
Denmark, Wis.—George DeBroux
Fremont, Wis.—Frank Koch
Waupaca, Wis.—L. Laux
Theresa, N. Y.—Philip McHugh
Scio, N. Y.—Erotus Robinson
Hastings-on-Hudson, N. Y.—Melvill Haines
Long Beach, N. Y.—Joseph P. Coyle
Patchogue N. Y.—Edward N. Bridge
Altmar, N. Y.—C. J. Campbell
Roosevelt, N. Y.—Carman P. Marino
Haverstraw, N. Y.—Peter A. Reilly
Potsdam, N. Y.—Lewis D. Dewey
Floral Park, N. Y.—Harry Curtis
Leicester, N. Y.—John F. Lynch
Westbury, N. Y.—Thomas J. Walsh
Clear Lake, S. D.—C. I. Force
Wilsonville, Ill.—Emil Avanzini
Onawa, Ia.—William Hale
Dumont, Ia.—Roy Ewing
Hurontown, Mich.—John Wagner
Manville, N. J.—L. P. Shubert
Mattituck, N. Y.—Charles Reeves
Kenmare, N. D.—Virgil Jergenson
Corning, Ohio—C. E. Starbuck
Silver Lake, Ind.—Frank Haney
De Witt, Ia.—N. F. McGinnis
Whitefish, Mont.—Al Chartiers
York, Neb.—Ernio Friel
Sayville, N. Y.—Clinton Bishop.
Minden, Ia.—Ferdinand Pieper.
Wilber, Neb.—William Skopec.
Hurley, Wis.—John F. Reardon.
Palmyra, Wis.—Frank Ewins.
Randolph, Wis.—H. R. Hopkins.
Dunkirk, Ind.—Walter Davenport.
Sigourney, Ia.—Rollie Conklin.
Round Lake, Minn.—L. G. Kiefer.
Clare, Mich.—Albert Haley
Canajoharie, N. Y.—George Bierman
Boonville, N. Y.—Fred C. Duvelow
Grafton, N. D.—Fred Baumgartner
Mondovi, Wis.—C. E. Otis
Southport, Conn.—Frederick Von Holtz
Milford, Mass.—Joseph J. Fahey
Guttenberg, N. J.—Jacob J. Kirchner
Platteville, Wis.—Frank Goodell.
Cooperstown, N. Y.—George W. Cooper.
Mountaindale, N. Y.—William Kline.
Printice, Wis.—Charles Engstrom.
Luxemburg, Wis.—John J. Peet.
Glenbeulah, Wis.—Ralph Anderson.
Ellendale, Del.—Charles Noibert.
Cresco, Ia.—Fred Burr.
Appleton, Wis.—George P. McGillan.
New Holstein, Wis.—Walter Mathes.
Central Lake, Mich.—J. H. Mathes.
Ocean Grove, N. J.—Raymond R. Gracey.
Monroe, N. Y.—Alvin Jansen.
New Richmond, Wis.—W. R. Brooks.
Ontanagon, Mich.—Robert Davison.
Schyler, Neb.—William B. Sladok.
Matawan, N. J.—John Marz.
Depauville, N. Y.—William Huchzermeier.
Upland, Cal.—G. A. Brest.
Cotati, Cal.—T. Mattson.
Clarksville, Mich.—John Kauffman.
Emerson, Neb.—Ernest Enke.
Sayville, N. Y.—Clinton Bishop.
Fremont, Neb.—Frank Heckes.
Forks, Wash.—Robert H. Taylor.
Stafford Springs, Conn.—William Delligan.
Goose Lake, Ia.—Gus Weller.
Freehold, N. J.—Albert Patten.
Gouverneur, N. Y.—Ashton Liscum.
Ballston Spa, N. Y.—Charles Butcher.

Group Photographed at the Ohio Chiefs' Convention

Top row, Mrs. Green, Mrs. Harton, Chief Gross of Tiffin, Chief Conlin of Hamilton, Chief Green of Steubenville, Chief May of Mansfield. Center row, Chief Bolish of Upper Sandusky, T. Alfred Fleming of the National Board of Fire Underwriters, Chief Harty of Youngstown Sheet & Tube Co., Chief Callan of Youngstown. Lower row, Chief Curtis of Sandusky, Battalion Chief Welsh of Columbus, Chief McFarland of Marion, Chief Lewis of Chillicothe and Chief Engineer Manning of the Ohio Inspection Bureau.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

USE OF HARD SUCTION LENGTHS AT FIRES

CITY departments have the convenience of connecting up to hydrants whenever it is necessary to obtain water for fighting fires. This modern convenience is often lacking in the smaller communities or else the water distribution system is not extensive enough to include the entire area of the town.

Where hydrants are not provided, the next best thing is to draft water from wells, rivers, lakes or even cisterns.

Special hose, termed suction lengths, are provided so that the pumper can be conveniently placed near the source of water. These lengths are heavy, and if hard suction is used, are cumbersome to some extent.

As time is an important element in fighting fires, any arangement that will cut down on the waste of moments in getting water on a fire, helps that much in increasing the efficiency of the company. Shall these lengths of suction be carried coupled together or not? This is an important question to volunteer fire companies, especially if the manpower is limited.

In the box on this page is the problem in full that is discussed in this issue. In the box on the following page is the question that will be treated in the next issue. Should you have some comments that you would like to add to the next discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y. The replies received to this problem follow:

Discussion of the Question

Russell K. Barker, Chief, East Randolph, N. Y.: I believe that if there is room on the truck to carry the suction lengths coupled together, it is well to do so. But with the new type of coupling, I can't see where it would save much time as the men who take the suction off the truck could snap it together as as soon as they can take it off the apparatus.

I believe that hard suction is more satisfactory than the soft suction.

The number of lengths of suction to be carried should be governed by places from which the pumper will be called upon to pump water—the distance between the apparatus and the water source. If two lengths will be enough to reach these places, I would not advise carrying more as the practice would add to the load of the truck.

H. Geister, Chief, Corte Madera, Cal.: Much depends upon where the city is located. Some Fire Departments would not have occasion to draft water in years, except in isolated locations, as drafting from wells or other supplies as the result of a break or temporary shut down of the water supply in the public water mains.

Hard suction lengths, coupled together, are difficult to carry on apparatus.

We have three four-inch diameter lengths, one coupled to the pump on each side and one carried for reserve. We use them on hydrants at all time, but they are very difficult to handle as they are stiff. The third length may come in handy as we find times when it is not safe to drive too close to the hydrant.

W. E. Cary, Chief, Chatham, Ill.: We have a volunteer department consisting of twenty-five members and we find that it is much better to carry our suction hose coupled together at all times. This saves much time in getting started to pump water after we arrive at the scene of a fire.

Regardless of the number of men in the Fire Department, only one or two men can work at a coupling at one time, so that the size of the personnel cannot help in speeding operations. We carry our suction hose coupled together running around the front of the apparatus, and when called to a fire, one man connects the suction hose to the pump, another puts the hose in the well from which water is obtained, while two men string out the discharge hose and also connect to the pump. We carry our 2½-inch hose coupled together so that little time is lost in getting a stream.

We must use hard suction as we have no water system and depend entirely on wells for our water supply.

We carry three ten-foot lengths of hard suction, coupled together, and an extra ten-foot length as a spare.

George S. Hull, Chief, Clinton, Conn.: My experience has been with volunteer firemen in a small country town, over a period of twenty years. We have fifty active men and two pieces of apparatus.

I wouldn't couple the hard suction. Three lengths are really needed to do effective work and thirty feet of hard suction would have to be bent to carry on one truck. Such loading would injure the suction, even if it is carried around the apparatus. There is generally time enough to couple up the suction while the hose is being stretched out and the nozzle attached.

Soft suction is more practical than hard in working from a hydrant. Nine tenths of all our fires are taken care of with the booster tank equipment. Most of my pumping would be in the back districts where no hydrants are available and the water must be drafted from a well. The small two-inch suction is better here than the larger size as it is easier to get into a cramped place. Such a line will supply a ¾ inch stream.

We use three lengths of both large and small hard suction—sixty feet in all, and a soft suction for hydrant use. In rural sections where shallow streams abound, it is helpful to have barrels sunk in strategic places in the stream to provide a proper place from which to draft water.

W. F. Ingold, Chief, Edgewater, N. J.: Much depends upon local conditions. Usually lengths of

HERE IS THE PROBLEM

Where a company does not have very many men, would it be better to carry the lengths of hard suction on the apparatus, coupled together?

Have you found much use for the hard suction line at fires?

Should three lengths of hard suction be provided or what other improvements do you suggest to make it easier for you to draft water at fires?

hard suction coupled together should not be used for hydrant work. I would recommend the practice, however, where sufficient men are not available, to assist in drafting water. I have tried the plan and find that it is much more practical to handle one length at a time.

We use the hard suction when drafting water. We draft water frequently because of our water frontage which borders one-half of the town. We never use 4½-inch diameter or larger hard suction on hydrants but use 3-inch hard suction with 4½-inch diameter or larger connections. We have 2½-inch connections which are used for factory hydrants when equipped that way.

Three lengths of hard suction should be provided when you have only one engine. If you have three or more engines, this is not necessary. When the depth of water permits, we have five or six-inch pipe in the water equipped with strainers and 4½-inch hydrant connections. I believe that this plan would be adaptable for any locality where there are accessible lakes, ponds, bays, rivers and streams.

Chief, Fort Hunter, Pa.: Suction hose coupled together would have a good and a bad effect depending on the type of connection to the pumper. In most cases one length of suction has been sufficient. There is, however, an advantage in having the lengths of suction coupled together but I believe for all purposes, that a single suction length is better.

We use hard suction almost exclusively. The soft suction may collapse when the draft is heavy.

A good practice for all fire apparatus companies would be to place three suction lengths on each piece of apparatus. This is particularly true in rural communities where water must be drafted and where no hydrant service is available. Very often the apparatus cannot be placed close enough to the water supply to be reached with two lengths of suction. In examining a number of bridges from which it is possible to draft water, we find that two lengths of suction would be insufficient to reach the stream below. It is well to be prepared for such situations.

James M. Parker, Ex-chief, Saint Cloud, Fla.: It is better to carry the lengths uncoupled as one line of suction would be too heavy and cumbersome. In seventy-five per cent of our fires, we only use one length of suction. Ninety per cent of the fires can be handled very nicely with city water pressure.

For some places it might be handy to have a long and a short line, but we have never required other than a single length.

Fred C. Hill, Chief, Osceola, Ia.: Where the department has only a few men and it is the practice to draft water most of the time, I believe that the lengths of hard suction should be coupled together. This would save time and less men would be required. I have not much use for hard suction lines.

If the apparatus carries three lengths of suction, it will be much easier to spot the pumper. If only two lengths are provided, it is necessary to get very close to the source of water supply.

We obtain our supply from hydrants and so only use one length of suction.

Calvin N. Perkins, Chief, Mattapoisett, Mass.: We carry three lengths of 4½-inch hard suction and three lengths of 2-inch hard suction—the 2-inch inside of the larger diameter suction.

We have only used the 4½-inch suction once in five years and then we used the six lengths—the 2½-inch connected to the 4½-inch in order to reach a brook so that we could reach a source of water.

We have hydrants and use two lengths of 2½-inch soft suction from the hydrants to the pumper. We use the 2-inch hard suction a great many times when pumping from wells and brooks. I believe that both 4½-inch and 2-inch hard suction should be carried.

HERE IS THE PROBLEM FOR THE NEXT ISSUE

Do you find that too active a participation in community affairs results in becoming involved politically?

How much activities should a Chief join outside of his department work?

Do you feel that political affiliations help in securing increased budget allowances? Why?

Edward G. Murray, Chief, Fort Washington, Pa.: When a company has few men, it is better to carry hard suction uncoupled as two men, one man if necessary, can couple up one length at a time.

We always use 4½-inch hard suction where possible. If not we use two lengths of 2½-inch hard suction.

We carry three lengths of 4½-inch hard suction on our apparatus, in troughs, which is good practice because most of the time it is impossible to reach the source of water with two lengths of suction. As a suggestion, it would be better for fire companies if states would require all contractors to put manholes on all bridges or highways that span a stream.

Albert E. Andersen, Chief, Cos Cob., Conn: I believe that one could couple the lengths of suction together just as quickly as one could handle them coupled. We use our hard suction to a great extent as we cover a large area that has no city water. We, therefore, have to draft from lakes, ponds and wells. I believe that three lengths of hard suction should be carried on pumpers that have to protect such territory. We carry four ten-foot lengths of hard suction on our pumper and one ten-foot length of soft suction. Many times we have had to use all the lengths of suction that we carried. When it is necessary to draft from a lake or pond and the ground is soft, it is impossible to get within fifty feet of the water. At such times it is good to have the extra lengths of suction.

Grover Parberry, Chief, Fowler, Col.: It is better to have the lengths uncoupled. We use hard suction often. Two ten-foot lengths have been enough for our use.

E. Rex, Chief, Fayette City, Pa.: If the suction is not coupled together, it is easier to handle. Most of our fires are so located that we have to pump water from streams. We carry two 6-inch and two 2½-inch hard suction lengths and in many cases we have to use all the lengths that we have. I believe that a pumper should carry at least three lengths of hard suction.

William H. McKevitt, Chief, Middleville, Mich.: I do not believe that it is a good plan to have the suction lengths coupled together. It only requires a few moments to couple the lengths and it is then possible to inspect the ends before the lengths are connected. I think the hard rubber suction is very useful and it lasts much longer than soft suction.

John J. Spiers, Chief, Lyme, Conn.: We use three lengths of hard suction in most of hook-ups and I can suggest no better way to draft water. We have a small volunteer Fire Department. If there are enough men, it is better to carry the hose in single lengths. We use hard suction entirely as all our drafting is from streams. We have no hydrants.

Walter Finkenbinder, Chief, Scott City, Kan.: We do not use hard suction. We carry our hose coupled together and we break joints according to the distance from the fire to the hydrant.

Joseph C. Wasser, Chief, Caseyville, Ill.: I believe that where a fire company does not have very many men, it would be an advantage to have the lengths of suction coupled together.

Allan A. Kingsbury, Chief, Medfield, Mass.: I do not believe it would be advantageous to couple suction lengths together on anything larger than 3½-inch, as it would be too clumsy to handle.

We have two lengths of suction coupled together on our pumper and we carry an extra ten-foot length. On our 600-gallon pumper we carry three ten-foot lengths of hard 4½-inch suction, not connected.

We have always used the hard suction as we have had to draft all our water. Up to the present, we have not had hydrant service but we expect it this year.

H. J. Leech, Chief, Yeadon, Pa.: When drafting water from an open space it is necessary to have a hard suction line so the suction will not collapse.

B. W. Norton, Chief, Bisbee, Ariz.: We find it much easier to use soft suction when companies are short handed. Hard suction lengths coupled together are too cum-

bersome on apparatus. We have had occasion to use soft suction on more occasions than hard suction.

We have no open bodies of water to draft from and we have to use hydrants at all fires. We have pumped out basements on several occasions and always had to use two lengths of hard suction.

We do not use pumpers in our high value district as all hydrants are four-way and have a pressure of 115 pounds at all times. This is ample for the buildings in our city.

Finley Card, Chief, Edmeston, N. Y.: Where the lengths of suction are coupled together, it is too heavy to handle for two men and besides there is not room on the average apparatus to carry the suction in this manner. We have found much use for the hard suction.

Three lengths should always be carried. It is best to educate persons living in rural districts to provide water supply near their building so that the Fire Department can obtain water.

Adolph Kolberg, Chief, Dumont, N. J.: The lengths should not be carried coupled. I believe that two lengths of suction are enough.

Truman M. Short, Chief, Winchester, Ohio: We have found much use for the hard suction. Three lengths of suction should be provided.

A Gasoline That Will Not Burn

A new gasoline has been developed in Germany, for internal combustion engines, that will not explode or burn when the vapors are carelessly exposed to flames or sparks. One may put out matches by immersing them in the fluid or hold the lighted match over the vapor without any harmful result.

In this new process of petroleum refining, the heavy residues are treated with hydrogen at high temperature and pressure. Under the influence of special stimulating chemicals which the chemist calls catalysts, the hydrogen combines with the heavy, tarry petroleum wastes to produce clear, mobile fluids highly suitable for motor fuels.

The new gasoline is ten per cent more powerful than the present aviation gasoline.

The new non-inflammable gasoline appears to find its greatest application in the field of aviation where a highly explosive fuel is now being used, and where many lives have been lost because of the fuel burning after a crash.

Regular aviation gasoline will ignite and burn freely at temperatures considerably below zero, but the new non-inflammable gasoline must be heated to 170° F. before it will ignite. The term "non-inflammable" simply means that it will not explode or will not burn at ordinary temperatures.

Iowa Firemen Meet in Council Bluffs

Fred W. Baer, of Washington, D. C., President of the International Association of Fire Fighters, spoke at the annual convention of the Iowa Association of Fire Fighters held in Council Bluffs.

Capt. Henry Jurgenson, instructor of the Iowa Service Bureau, was one of the speakers. He said that the men should explain to their local residents the importance of maintaining a well equipped and manned Fire Department. By saving one-third of the fire waste in the country, he pointed out, the taxes would be appreciably reduced.

The officers are J. W. Martin, Council Bluffs, President; W. I. Nelson, Cherokee, First Vice-President; Elmer Hubacher, Dubuque, Second Vice-President; William Hottel, Des Moines, Secretary-Treasurer; Trustees, L. A. Moran, Sioux City, Dolph Becker, Oelwin, and F. Steinert of Missouri Valley.

The 1933 convention will be held in Sioux City.

Northern Indiana Firemen Meet

The twenty-seventh annual convention of the Northern Indiana Volunteer and Industrial Firemen's Association was held in Columbia City, June 10-11.

There were hose laying, cart races, ladder climbing and other contests. Major awards were won by an industrial team of S. F. Bowser & Co. Dances were held at the city hall.

Bud Moon, Warsaw, was elected President; T. J. Yoos, Markle, Vice-President; G. W. Darr, Columbus City, Secretary-Treasurer. The convention was in charge of Paul Grimme, of the General Electric Company, retiring Vice-President.

WESTCHESTER FIRE ZONING PLANS TO BE PERFECTED BY NEXT FALL

Announcement Made at Regular Meeting of Fire Chiefs' Emergency Plan That Committee Expects to Have Report Ready by October

COMPLETE zoning for emergency assistance in case of a conflagration or large fire will be an accomplished fact if the hopes of the Zoning Committee of the Fire Chiefs' Emergency Plan, of Westchester County, N. Y., are realized. This fact was brought out in a report by this committee, made by Chairman Lemon, and the subsequent discussion, at the regular meeting of the Plan. This took place at Fire Headquarters, Verplanck, N. Y., on Wednesday evening, June 15, it being the last meeting until next October. There was a good attendance of Westchester County Chiefs and other Fire Department officers present. A short address of welcome was made by Fire Commissioner Ferry, of the Verplanck Fire District.

After reporting progress for the Committee on the Code Word, Ex-Chief Lemon, Mamaroneck, spoke at length on the work of zoning so far accomplished and what the Zoning Committee hopes to do. He said that there should be network of zones throughout the county. The zone covering the towns bordering on Long Island Sound was working out very satisfactorily, and some of the other zones were organized, notably that including Peekskill and the surrounding villages. Captain Dawkins said that the directory of the Westchester departments upon which he had been working was now practically complete, only five communities being lacking in the list, and these he hoped to have shortly. He believed by the October meeting that the work would be issued in book form.

It was considered best for each zone to choose its own secret code word to be used in identifying the Chief calling for assistance over the phone. Ex-President Travis spoke of the advantages of the zoning plan and told of how well it had worked in the Peekskill district. He suggested that a speaker's bureau be established by the Plan, so that small Fire Departments could have the advantage of the experiences of specialists in handling any individual problems. Such speakers could be sent to the departments by the bureau. The matter was referred to the Educational Committee for action.

Mr. Sowerby, of the Red Cross, spoke briefly upon the instruction of firemen in rescue work in cases of drowning and the handling of water accidents. He offered to give free first aid instruction to any departments desiring it.

President Steuhl announced that the next meeting would be held in Eastchester Township in October.

Refreshments were served by the Verplanck Fire Department after the meeting.

Law Protects Firemen's Vacations

Firemen of Redlands, Cal., are going to have vacations this year and with pay, despite the condition of the city's finances. Recently the City Council cut the firemen's salaries and decided that if the firemen take vacations, they should get no pay for the time they are absent. Chief Perrin Trowbridge reminded the City Council of the state law which provides that every fireman may have a vacation without loss of wages. The Council rescinded its action.

THOMAS F. MAGNER.

Prevention and Control of Farm Fires

A joint committee consisting of representatives of the National Fire Waste Council of Washington, D. C., and the Farm Fire Protection Committee of the National Fire Protection Association of Boston, working with a staff of experts, have issued a book on "Prevention and Control of Farm Fires." It contains a great deal of value to the village and town official and to the person who has extensive property in rural areas. A perusal of this book will give one a general picture of the protection of farm property.

There are chapters on Outline of Rural Fire Hazards, Defective Chimneys and Flues, Spontaneous Heating and Ignition of Farm Products, Lights and Lighting Systems Other Than Electricity, Power Farm Machinery, Incubators and Brooders, Location of Farm Buildings, Lightning Hazard and Lightning Protection, The Rural Fire Department, A Fire Safety Program for Rural Communities, The Function of Insurance, and a score of other chapters equally as interesting.

N. N. W.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Heating of Water in Booster Lines

To the Editor:

Recently I was watching the operation of a Fire Department, and during the course of salvage work they were using water from a booster tank, and the water coming from the nozzle was very hot, so hot that the nozzle could not be held comfortably with bare hands. The water was coming from no other source than a rotary pump of a fire engine about 13 years old. They pumped water from the tank through rotary gear pump but am not sure if operated in pressure or capacity.

B. F. J.

Answer: I know of no reason for water becoming so heated, with the possible exception of friction in the pump and line. If the line were long, and high pressure were used within, it is possible that the water might have been heated to such a point that it would be readily noticed.

So far as I know, none of the manufacturers have heating coils in the booster tank to prevent them from freezing so that the other explanation seems to be the only likely one.

Pressure Calculations in Small Lines

To the Editor:

What would be the nozzle pressure, engine pressure and friction loss in 500 foot line of 2½-inch fire hose, siamesed into two 150 foot lengths of 1½-inch fire hose, nozzle tips ⅝-inch or ¾-inch outlets?

What would be the approximate nozzle pressure, engine pressure and friction loss in a 1,000 foot line of 2½-inch fire hose siamesed in the same manner?

G. H. J.

Answer: The information given does not permit any calculations. We must either have the nozzle or the engine pressure before solution can be made.

Assuming a nozzle pressure of 35 pounds in each case, the following calculations have been prepared:

The quantity of water flowing from ⅝-inch nozzle under 35 pounds pressure = $30 \times \frac{5}{8} \times \frac{5}{8} \times \sqrt{35}$.

= 30 x .625 x .625 x 5.92

= 69.4 g.p.m. or 70 g.p.m. approximately.

The friction loss in 1½-inch hose carrying 70 g.p.m. is 17 pounds per 100 feet. For 150 feet the friction loss would be 1½ x 17 or 25.5 pounds.

Pressure at the siamese connection will then be nozzle pressure plus friction loss in either the single lines, or 35 plus 25.5, or 60.5 pounds.

The flow through the 2½-inch hose from the engine to the Y connection is the sum of the flows through the two branch lines or 2 + 70 or 140 g.p.m.

The friction loss in 500 feet of 2½-inch hose carrying 140 g.p.m. equals 5.2 x 5 or 26 pounds.

The engine pressure is then the pressure at Y plus the friction loss in the 2½-inch hose or 60.5 plus 26, or 86.5 pounds approximately.

If ¾-inch nozzles are used the discharge at each nozzle at 35 pounds would be approximately 100 g.p.m.

Friction loss per 100 feet of 1½-inch hose carrying 100 g.p.m. is 33 pounds.

The friction loss in 150 feet of 1½-inch hose carrying 100 g.p.m. = 1½ x 33 or 49.5 pounds.

The pressure at the Y will then be 35 + 49.5 or 84.5 pounds.

The 2½-inch hose will carry the flow of the two branch lines or 200 g.p.m. Friction loss in 1½-inch hose carrying 200 g.p.m. is 9 pounds.

This is found from the formula friction (100 ft. of 2½-inch hose) = $2 \times Q \times Q + \frac{1}{2} Q$.

The friction loss in 500 feet of hose 2½-inch hose is 5 times as much or 45 pounds.

Then the engine pressure in this case will be 84.5 + 45 or 129.5 pounds.

If 1,000 feet of 2½-inch hose used in each of the above cases, the friction loss in the 2½-inch hose would be twice as much as in the 500 foot line or in the case of the ⅝-inch tip, 2 x 26 or 52 pounds. In this instance, the engine pressure will equal 60.5 + 52, or 112.5 pounds.

Where the ¾-inch tips are employed, the friction loss in 1,000 feet of 2½-inch will be twice what it is in 500 feet or 2 x 45 or 90 pounds.

Engine pressure = 84.5 + 90, or 174.5 pounds.

Care of Fire Extinguishers

To the Editor:

Please explain why it is considered absolutely necessary to annually discharge and recharge soda and acid, and foam type fire extinguishers.

If the above types of extinguishers have the body burst from frost, would you recommend soldering or brazing to repair the damage.

At 60 or 100-pound water pressure, would you consider a 3-inch ordinary commercial type water meter capable of supplying a two-way 6-inch fire hydrant with two 1 inch fire streams flowing?

F. J. H.

Answer: Unless the extinguishers are in the best of condition, it is possible within one year's time that part of the solution will evaporate and some of the chemical ingredients will settle out of the liquid. Instances have been known where the soda from the soda solution in the soda-acid type, settled out in the connection to the short length of chemical hose. When it came time to discharge the extinguisher, the flow of water was obstructed and excessive pressures were created inside of the extinguisher. To prevent the chance for serious accident and to insure that the extinguishers are in proper operating condition, it is wise that once each year they be inspected, discharged and then recharged.

According to Knight & Thomas, fire protection equipment manufacturers:

"When either soda-acid or foam type fire extinguishers have been damaged by their contents freezing, they should be sent to the makers for repair. Under no circumstances should anyone locally be permitted to tinker with them, since in the case of soda-acid extinguishers, the pressure generated by the chemicals when the device is discharging is nearly 100 pounds to the square inch.

"In the case of foam extinguishers, once the extinguisher starts generating, 20 gallons of foam are crowded into a space intended for 2½ gallons. This is a severe strain on the tank, and when new, the construction of these tanks cannot be too good.

"We find that most persons seem to think that repairs should be done cheaply. It is true that a pair of shoes can be repaired for less than its original cost, but in the case of fire extinguishers, the apparatus has to be practically taken apart, and this together with the reassembling, materials used, refinishing and so forth, makes the work cost nearly as much as new apparatus. When properly done, the repaired extinguisher is practically as good as new."

Two 1 inch fire streams with a pressure varying from 60 to 100 pounds would deliver between 200 and 300 gallons per minute. According to standard specifications for a 3-inch meter, it can deliver 300 g.p.m. Of course such a

meter can deliver more than that amount, but to do so, it must be operated at a greater speed and the wear will be greater, and the accuracy less.

Maryland to Hold Course in September

Sherwood Brockwell, State Fire Marshal of North Carolina, will be in charge of the classes of the Third Firemen's Short Court to be held at the University of Maryland, September 6-8, under the direction of Dean A. N. Johnson of the College of Engineering. He will be assisted by Deputy Chief Travers, Baltimore Fire School, Chief Warr of the Baltimore Salvage Corps and Engineer Fearn of the District of Columbia Fire Department.

Lecture periods have been reduced to a minimum and will take place during after-supper sessions. Daylight hours will be devoted to demonstrations and practical work. Gas mask demonstrations will be under supervision of an expert from U. S. Bureau of Mines.

There will be a one dollar registration fee. The charge for meals and lodging on the campus for the three-day period has been reduced to five dollars.

The school program follows:

Tuesday, September 6

8 a. m.—Registration, Lecture Room of New Engineering Building.
10 a. m.—Formal opening of the course in Engineering Lecture Room, Dean A. N. Johnson, presiding. Welcome by President R. A. Pearson of the University of Maryland. Address by Walter E. Hough of Baltimore. Introduction of Sherwood Brockwell, presiding officer of the course, and beginning of work.
1:15 p. m.—Demonstration of Aerial Truck, rescue and ladder work, led by Brockwell.
7 p. m.—Blackboard discussion led by Brockwell.
8 p. m.—Electrical demonstration and talk by Prof. Myron Creese of the Engineering College.

Wednesday, September 7

8:30 a. m.—Salvage operations and drills led by Chief Warr of the Baltimore Salvage Corps.
1:15 p. m.—Salvage operations and drills, continued.
7 p. m.—Instructions on Ventilation and Fire Fighting Methods in Frame Buildings by Deputy Chief Travers of the Baltimore Training School. Blackboard discussion by Brockwell.

Thursday, September 8

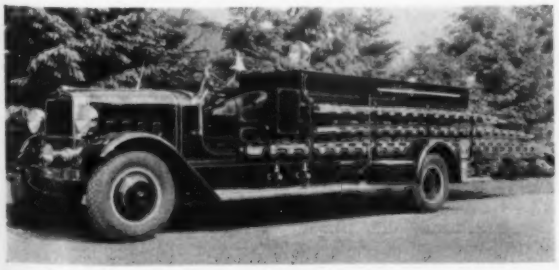
8:30 a. m.—Instructions in the use of the Gas Mask by a representative of the U. S. Bureau of Mines.
1:15 p. m.—Practical demonstrations and instructions on fire equipment and proper methods of using.
4 p. m.—Awarding of Certificates.
5 p. m.—Adjournment.

Connecticut Firemen Meet in August

The Forty-Ninth annual convention of the Connecticut State Firemen's Association will be held in the School Auditorium, West Broad street, Pawcatuck, Conn., on Friday and Saturday, August 19-20, according to an announcement made by Secretary David W. Harford of South Norwalk. Many important matters pertaining to the good and welfare of the Association will be taken up before the convention. A complete revision of the Constitution and By-Laws will be undertaken.

The convention will be called to order by President William Daley, Hartford Fire Department, who will relinquish his term of office in favor of Vice-President Thomas Bracken of Branford.

THOMAS F. MAGNER.



Maxim Ladder Truck Delivered to Hyannis, Mass.

A double bank Maxim ladder truck was delivered to Hyannis, Mass., on June 18. The equipment carried varies from a 10-foot folding ladder to a 50-foot extension ladder. In all, 276 feet of ladders are carried on this truck.

Chief Alt of St. Louis Dead

Charles Alt, Chief of the Fire Department, St. Louis, Mo., died at his home of erysipelas after a three week's illness which followed a throat infection. He was sixty-seven years old and a member of the department for thirty-seven years.

The Late Chief Charles Alt

Some time early in June, Chief Alt suffered from a cold that developed into streptococcus throat infection and then later into erysipelas. Until a few days before his death, his recovery was expected.

He was born in St. Louis County in 1865 and when he was a small boy his family moved to St. Louis. In 1889 he joined the Police Department as patrolman but he left in 1895. Six weeks later he joined the Fire Department.

After eighteen months service he was made a Lieutenant and in 1898 was advanced to Captain. He served at this post until 1919 when he was made district chief in charge of the Eighth District. In 1925, Chief Alt was made head of the department following the death of Chief William G. Panzer.

He was a member of the Scottish Rite Masons and belonged to the Shrine.

He is survived by his widow and by three brothers.

Oklahoma Firemen Hold Convention

Registration at the thirty-eighth annual convention of the Oklahoma State Firemen's Association, showed that there were 338 persons present and that 164 departments were represented. The convention was held in McAlester, Okla., June 1-3.

Members of the Oklahoma City Fire Department demonstrated radio as applied to fire departments. The convention hall was wired with aerial, and instruments were placed so that the visitors could see the operations and hear instructions being sent and picked up.

J. G. Read, State Insurance Commissioner, spoke on "The Firemen's Pension Fund." Chief J. Ray Pence presented a paper on "Rural Fire Departments."

The outstanding talk was by Capt. Raymond Granger, of Tulsa, and so many requests were received for copies of the paper, that the association will send it out in pamphlet form to all its members.

George B. Goff, Chief of Oklahoma City, was elected Third Vice-President. All of the old officers were advanced so that the new officers are George H. Stewart, Tulsa, President; Ray Pence, Stillwater, First Vice-President; John H. Moore, Ardmore, Second Vice-President; Charles Slemp, Oklahoma City, Secretary-Treasurer (re-elected for twenty-third time).

The 1933 convention will be held in Oklahoma City.

Minnesota Firemen Elect Chief Dunn

The sixtieth annual convention of the Minnesota State Firemen's Association was held in Thief River Falls, June 13-16. About 650 persons were present. The convention was welcomed by Mayor Tungseth.

D. A. Boulden, Chief of Winnipeg, Canada, gave an illustrated lecture.

The new officers are Chief Owen C. Dunn, St. Paul, President; C. E. McIlhargey, Hibbing, First Vice-President; Theodore F. Lee, Benson, Second Vice-President; Fred Pfaender, New Ulm, Secretary; P. N. Pederson, Moorehead, Treasurer and Charles S. Dailey, Bemidji, Statistician.

Benson and Rush City both placed bids for the 1933 convention, but it was awarded to Benson.

Plans for a fire station to be erected in Greensburg, Pa., are to be revised as bids received on the present specifications were too high.

Gas Explosion Wrecks Stores

Fifty persons were injured and one died as the result of an illuminating gas explosion in Highland Park, Mich., which was caused when coal, which was being emptied down a chute, broke a gas main. Three stores were leveled and windows in the immediate neighborhood were broken.

When an extension was built for one of the stores, the gas pipe was left in the open. A coal chute was built in front of the pipe.

A man was in the basement when the pipe snapped. He shouted a warning to workers there and to persons in the adjoining stores. An alarm was turned in. Chief Baker and firemen arrived. Firemen donned gas masks and just as they were prepared to enter the basement, they were stopped by the explosion. Chief Baker was knocked to the ground by falling bricks, and though injured, directed rescue parties in digging for possible victims. Flames which broke out were extinguished in a short time.

Shortly After the Gas Explosion Took Place in Highland Park, Mich.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the month of June. These figures, compiled from telegraphic reports are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Month Ending June 30	Loss in Thousands of Dollars
Thomasville, Ga.—Fletcherville and Dewey City Schools damaged	25
Big Falls, Minn.—Property in business district	100
Glenshaw, Pa.—Whse. of Glenshaw Glass Co. destroyed	40
Shreveport, La.—Factory of Allen Lumber Mfg. Co. destroyed	50
Chickasha, Okla.—Property of Southern Wholesale Grocery Co.	25
Pembroke, Ont.—Mill of Pembroke Milling Co. destroyed	30
Schenectady, N. Y.—Taberski billiard hall destroyed	25
Washington, Pa.—State Theatre owned by Warner Bros.	150
Morris, Kan.—Grain elevator destroyed	50
Kaukauna, Wis.—Two bldgs. of Niesen Pulp Co., adj. property	55
Pittsburgh, Pa.—Garage and terminal of Kenny Transfer Co.	150
Lowell, Mass.—Lajoie Bros. coal yard, adj. property	45
Jacksonville, Ill.—Fox-Illinois theatre, Scott bldg., adj. property	30
Chicago, Ill.—Vacant building at 1701-21 S. Wabash	225
Crosby, Minn.—Linnema Clothing Co. store destroyed	30
O'Dell, Ore.—Several warehouses destroyed	25
St. Joseph, Mo.—Country home of W. K. James, destroyed	50
Orangeburg, S. Car.—Plant of Bamberg Lumber Co. damaged	125
Amherst, Mass.—Cathedral apartments on Pleasant St., destroyed	45
North Portland, Ore.—Church and three dwellings	25
Memphis, Tenn.—Business property at Jefferson & Adams Sts.	80
Binghamton, N. Y.—Garage of Marshall-Nash Motor Co.	25
Marked Tree, Ark.—Busy Bee Hotel, adj. property	40
Cleveland, Ohio—Ellington Apartments destroyed	80
Newport, Tex.—Six buildings destroyed	25
Sunnyside, Wash.—Property of Evaporated Fruits, Inc.	80
Murfreesboro, Tenn.—Plant of New-Journal, damaged	25
Henderson, Ky.—Whse. of Tri-County Loose Leaf Tobacco Co.	40
Hopewell, Va.—Plant of Atmospheric Nitrogen Corp. damaged	25
Humboldt, Ariz.—School building destroyed	45
Spencer, W. Va.—Residence of Capt. H. J. Simmons, destroyed	30
Thomasville, N. C.—North State Veneer plant destroyed	40
Dayton, Ky.—Clubhouse and bathhouse of Tacoma Amusement Park	30
Monticello, N. Y.—Washington Mansion Inn, adj. property	25
Anderson, Ind.—Sears-Roebuck store damaged	25
Monroe, La.—Dixie Bedding and Furniture Co. property	25
Keyport, N. J.—Plant of Clifford Lumber Co., Matawan Township	45
Clyde, N. Y.—Plant of Wood Milling Co., damaged	30
Marion, Ind.—Peerless Printing Corp. plant damaged	25
Midland, Ont.—Lumber yard of Letherby, Terry Nicholson	80
Norfolk, Va.—White Lumber Co. plant	50
Newport, R. I.—Villa "Arleigh" F. J. Stevens, owner	75
Ann Arbor, Mich.—Three business buildings destroyed	45
Taschereau, Que., Can.—Business and residential property	25
West Haven, Conn.—Savin Rock Amusement Park bldgs. destroyed	125
Fort Sheridan, Ill.—Army post laundry destroyed	80
Buffalo, N. Y.—Four whses. of American Terminal Whse. Co.	80
Chelsea, Mass.—Business property at 123 Pearl St.	35
W. Leesport, Pa.—Fairview Hotel, adj. property destroyed	25
Ellicottville, N. Y.—Plant and whse. of Ellicottville Basket Co.	80
Santa Paula, Cal.—Presbyterian Church damaged	25
Natchez, Miss.—Plant of Parker Packing Co., destroyed	65
Franklin, Ohio—Warehouse of Cheney Pulp & Paper Co.	25
Orillia, Ont.—Barrel factory of George Milligan, destroyed	25
Cando, N. Dak.—Two grain elevators destroyed	80
Perth Amboy, N. J.—Property of Maboy Lighting Co., adj. structures	25
Watertown, N. Y.—Hungerford bldg. and adj. property	300
Reno, Nev.—"The Willows" resort building destroyed	45
Vancouver, B. C.—Plant of Capilano Timber Co. destroyed	650
Petersburg, Va.—Dwelling of H. S. Seward, 3 mi. from here	30
Killaley, Sask.—Hotel and adj. business property	45
Palco, Kan.—Several business establishments destroyed	25
S. Dallas, Tex.—Plant of Dallas Rug Mfg. & Renovating Co.	25
Bullard, Tex.—Bullard gin and crate factory destroyed	35
Richardsville, N. B.—Lumber mill, bakery, adj. property	35
Kansas City, Mo.—Plant of Sewell Paint & Varnish Co.	160
Conrad, Mont.—Plant of Conrad Refining Co. destroyed	80
Erie, Penna.—Reich dept. store, adj. property	160
Lexington, Ky.—Property of Lexington Utilities Co.	45
Paris, Tex.—Woodland Hotel and several stores	25
El Paso, Tex.—W. T. Grant building damaged	160
Fulton, N. Y.—American Woolen Mill damaged	80
Temiskaming, Ont.—Property of International Paper Co.	25
Gladstone, Man.—Four business buildings destroyed	25
Clifton, N. J.—Factory of Kirman Rug Co., destroyed	80
Dallas, Tex.—Equipment at Well No. 1 of Plains Producing Co.	25
Philadelphia, Miss.—Business property owned by Otto Seward	35
Truro, N. S.—Three barns on Beech Hill Farm destroyed	125
Clay, N. Y.—Canning plant of Ward Moulton damaged	45
Wisconsin Dells, Wis.—Mirror Lake Inn, Mrs. A. L. Ringling, owner	125
Squantum, Mass.—Property of Victory Shipbuilding Co. several vessels	1,000
Gainesville, Ga.—Majestic Theatre damaged	50
Des Moines, Iowa—Plant of Supto Mfg. Co. damaged	25
Council Grove, Kan.—Fairmont Creamery destroyed	45
Barnegat City, N. J.—Sunset Hotel owned by Richard Myers	35
Hamtramck, Mich.—Plant of Buick Motor Sales destroyed	40
New Rochelle, N. Y.—Residence of Ercules Molea destroyed	25
Trenton, Ky.—Methodist church, adj. property	25
Camden, N. J.—Pennsylvania Railroad Y. M. C. A. bldg.	125
Gettysburg, Ohio—Plant of Ira Petersime & Sons damaged	50
Macon, Ga.—Citizens and Southern National Bank bldg.	500
Lenoir, N. C.—Whse. of Stubbs Veneer Co., adj. property	100
Ottumwa, Iowa—Ice house of Rublington Railway Co.	45
Detroit, Mich.—Two lake steamers and two freighters	80
Milford, Del.—Governor Watson block damaged	25
Delavan, Wis.—Hetzel flour mill damaged	25
Chicago, Ill.—Engineers Club, Federal St., damaged	45
Fort Erie, Ont.—Seven cottages destroyed, others damaged	40
Pasadena, Cal.—Union Electric Co. building damaged	25
Grand Falls, N. F.—Plant of Co-operative stores destroyed	125
Montgomery, Ala.—Plant of Capital City Machine Co.	35
Wilson, N. Y.—Dwelling and barns on S. A. Moot farm	25
Omaha, Neb.—Three downtown buildings destroyed	125
Donegal, Pa.—Karzan garage destroyed	40
Hatch, N. Mex.—Latham store, adj. business property	35
Horse Cave, Ky.—Property occupied by Ford Agency	35
Toledo, Ohio—Superior Street business block	160
Pellston, Mich.—Plant of Jackson & Tindle, damaged	25

Fire Damages State Penitentiary

Fire of accidental origin, spread with alarming rapidity through the State Penitentiary at Columbia, S. C., recently, and before the blaze was under control, it had destroyed nine buildings and had caused $200,000 damage. Only the industrial part of the prison was affected.

After the alarm was sounded, all prisoners of the main cell block were released to the yard. Some were injured trying to get out of the chair factory or in fighting the fire.

Chief A. McC. Marsh of the Columbia Fire Department said that in the vicinity of where the fire had started, there were several carloads of excelsior. This material was stored under the warehouses which were built up off the ground. When the fire reached highly combustible material, it made rapid headway.

The Fire Department remained on duty until midnight. Four companies of the National Guard were called out. City firemen were assisted by the State Hospital Fire Department.

As far back as 1930, during Fire Prevention Week, a report was prepared of the great fire hazards that existed at the penitentiary, as found by the Fire Department.

Governor Blackwood, and prominent state and city officials, praised the good work performed by the Columbia Fire Department in command of Chief A. McC. Marsh.

Plans have been completed for a new fire station to be erected at Two Rivers, Wis.

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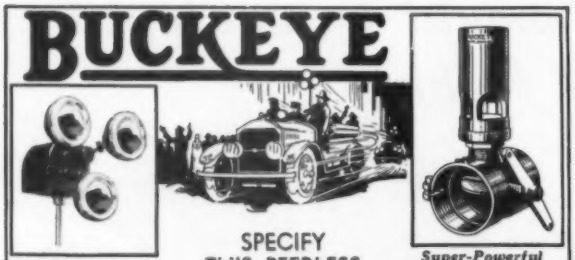

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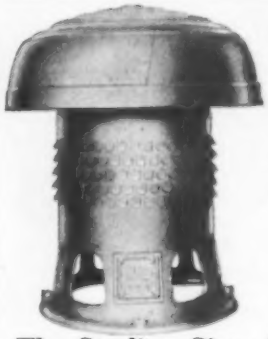

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It's often necessary to move apparatus at a fire. Automobile traffic hates to be held up by a line of hose stretched across the right of way.

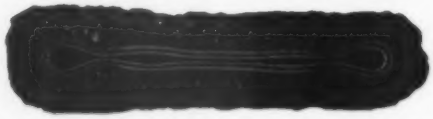
Why ruin your hose by driving over it? Or waste valuable time cutting off and disconnecting?

The Wausau Protector is a big time and money saver—easy to handle and carry. Order a set today, or write us for particulars.

Wausau Fire Hose Protector Co.

1520 Harmon Place, Minneapolis, Minn.

Bi-Lateral Fire Hose



The one hose that does not require frequent replacements.

Always reliable for fire service no matter how old, if the jackets are intact.

Lined with three rubber tubes, specifically guaranteed for six years.

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A complete line, including
Wax Treated - Solid Multiple Woven
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RUBBER CORPORATION

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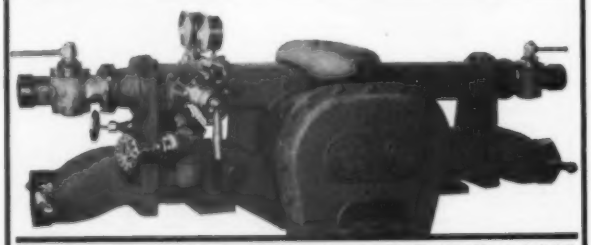

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"The World's Best by Test"

offer the world's greatest and most versatile range of choice involving sizes and methods of operation.

Write for descriptive matter showing sirens that have never lost in competition.

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SAN JOSE CALIFORNIA

Chief Wells Heads Southeastern Section

Education of firemen was stressed by Chief D. W. Brosnan of Albany, Ga., President of the International Association of Fire Chiefs, in opening the fifth annual convention of the Southeastern Section which was held in New Brunswick, Ga., June 9-10.

The educational policies of Chief Brosnan were endorsed by Thomas Haney, former Chief of Jacksonville, Fla., and by Sherwood Brockwell, Fire Marshal, Raleigh, N. C.

Chief J. H. Monroe, Savannah, President of the section, spoke on "Modern Fire Fighting." Chief T. L. Newborn, College Park, Ga., gave a talk on "Volunteer Fire Fighting," and said that the subject was larger in scope than the general public realized.

A. S. Kloss, Manager of the Hercules Powder Company, told the chiefs of the use of dynamite in fighting fires and explained how much dynamite to use in certain types of fires.

During the convention, music was furnished by the Savannah Fire Department Band.

Chief Henry Wells of Newberry, S. C., was elected President. Other officers are Chief H. R. McMillan, Jacksonville, Fla., First Vice-President; Chief J. Foster. Newport News, Va., Second Vice-President; Chief J. L. Miller, Concord, N. C., re-elected Secretary.

Both Winter Garden, Fla., and Savannah, Ga., put in bids for the 1933 convention but Savannah was selected as it was more centrally located.

Dominion Association Adopts Program

A tentative program for the twenty-fourth annual convention of the Dominion Association of Fire Chiefs has been approved by the Board of Directors. The convention is to be held at the Canadian National Hotel Nova Scotian, Halifax, N. S., on July 19 to 22. The program is as follows:

Tuesday, July 19
9 a. m.—Registration.
10 a. m.—Opening of Convention by President H. Guerin.
Invocation.
Introduction of Distinguished Guests.
Address of welcome by the Lieutenant Governor of Nova Scotia.
Address of Welcome by His Worship Mayor A. A. Thompson.
Address of Welcome by Ald. Walter Mitchell, Chairman Fire Dept.
Response to Addresses by Past President A. Debeau, Verdun, Que.
2:30 p. m.—Business Session.
8:30 p.m.—Informal Ball at Headquarters Hotel Nova Scotian.

Wednesday, July 20
9 a. m.—Business Session.
2:30—Business Session.
Visits to exhibits and foam demonstration.
7:30 p. m.—Civic Banquet at Headquarters Hotel Nova Scotian.

Thursday, July 21
9 a. m.—Business Session.
11:30 a. m.—Official Photograph and Auto Drive around City.
2:30 p. m.—Trip on the Harbor followed by a Clam Bake.

Friday, July 22
9 a. m.—Business Session.
2:30 p. m.—Final Business Session and Close of Convention.
8 p.m.—Band Concert in Public Gardens.

LADIES PROGRAM

Tuesday, July 19
10 a. m.—Opening and Memorial Service.
3 p. m.—Ladies' Committee will entertain at Tea for a "Get Together" at Headquarters Hotel.
8:30 p. m.—Informal Ball at Headquarters.

Wednesday, July 20
10 a. m.—Shopping Tour.
3 p. m.—Theatre Party at Capitol Theatre.
7:30 p. m.—Civic Banquet at Headquarters.

Thursday, July 21
11:30 a. m.—Photo and Auto Trip around City.
2:30 p. m.—Trip on Harbor with Clam Bake.

Friday, July 22
10 a. m.—Annual meeting of Ladies' Auxiliary to be held at Headquarters.
8 p.m.—Band Concert in Public Gardens.

Michigan Firemen to Meet in Monroe

The annual convention of the Michigan State Firemen's Association and the fire college will be held in Monroe, Mich., July 11-14. The visitors will be welcomed by Mayor Martin, and Chief J. N. Clark of Zeeland, Second Vice-President, will respond.

A discussion on rural fire protection will be led by Chief L. G. Knowles of Freeport. Paxton Mendelssohn of Detroit will lead a discussion on fire service to cities. C. V. Lane of Lansing will be in charge of the discussion on the Michigan new dry cleaning law.

The school will be divided up into four groups, and while each group will attend a different lecture at the same hour, before the school will be over, each one will have the same amount of instruction.

Chief A. M. Jaeger of Wyandotte will be in charge of Group A; Chief Roy Mottersheard, Dearborn, Group B; Chief C. E. Underwood, Manistique, C, and Paul Lefke, D.

Captain Keefe of Detroit will demonstrate hose evolutions; Captain Pape of Detroit, ladder evolutions; Harry K. Rogers of the Western Actuarial Bureau, Chicago, salvage work, and Dr. Muirhead of St. Louis, first aid as prescribed by the American Red Cross.

A comprehensive schedule of entertainment for the ladies who may attend, has been worked out by a local committee.

Evans Named Chief of Everett, Mass.

James J. Evans has been appointed Chief of the Fire Department in Everett, Mass., as successor to Chief Philip A. Ham, who has been retired on pension.

The new Chief was born in 1893 and was educated in the Everett schools. He served overseas in the World War with the 104th Infantry of the Yankee Division. He joined the Everett Fire Department in 1919; was made a lieutenant in 1928; and promoted to captain in 1929. He is a graduate of the Boston Fire College.

HARRY BELKNAP.

Firemen to Honor Washington

A committee consisting of Chief James M. Duncan, Jr., of Alexandria, Va., and a local group, are making plans for the coming convention of the Virginia State Firemen's Association and the annual convention of the Cumberland Valley Volunteer Firemen's Association, both to be held in Alexandria, Va., August 10-12.

O. W. Dabney, Staunton, Va., is Secretary of the Virginia Association and C. L. Jacobs, Waynesboro, Pa., is Secretary of the Cumberland Association.

On one of the days, officers and members of the associations will make a pilgrimage to Mount Vernon to place a wreath on Washington's Tomb, to honor him as a volunteer fireman.

Celluloid Fire Traps Three Employees

Fire which started in a pile of celluloid in the third floor dress trimming shop of a seven-story loft building in New York City, trapped two girls and a man, attracted a large crowd from the Times Square section.

Great clouds of acrid smoke were given off by the celluloid and other burning material. Eight of the shop employees succeeded in making their exit but two girls were brought down by means of a ladder, and an aerial ladder was raised to rescue a man on the seventh floor.

Value of Modern Fire Alarm Building Proven in Montgomery, Ala.

Fire completely destroyed the city hall of Montgomery, Ala. Adjoining this, but separated only by a twelve-foot alley, is located the fire-resistive central fire alarm building. Even though burning walls from the city hall fell upon the fire alarm headquarters, there was no damage to the fire alarm apparatus and the fire alarm system was never out of service for a moment. The only damage was a number of broken wired glass windows in the fire alarm headquarters when the wall of the city hall fell upon it.

THE FIGHTING OF FIRES WHICH INVOLVE CHEMICAL HAZARDS

This Instalment Deals With Poisonous Gases, Such as Ammonia, Nitrous Oxide Fumes and Hydrogen Sulphide

By Lionel K. Arnold

Assistant Chemical Engineer, Engineering Experiment Station, and

Lindon J. Murphy

Municipal Engineer, Engineering Extension Service, Iowa State College

For the accompanying article, the sixth installment of which is published herewith, FIRE ENGINEERING *is indebted to the Official Publication of the Iowa State College of Agriculture and Mechanic Arts, it being comprised in Bulletin No. 9, Engineering Extension Service:*

Poisonous Gases (Continued)

Ammonia

AMMONIA, NH_3, is a colorless gas heavier than air with a suffocating odor. It is shipped as the liquefied gas in cylinders or as a solution of the gas in water in bottles or carboys.

It is used widely as a refrigerant in cold storage plants and ice factories. The odor of ammonia is characteristic and serves as a warning. It is dangerous for exposures of more than ½-hour in amounts causing immediate irritation of the throat and eyes and dangerous for even short exposures in concentrations sufficient to cause coughing. Ammonia is not ordinarily considered explosive, but under high temperatures breaks down into nitrogen and hydrogen, the latter being explosive. Ammonia itself will burn as long as sufficient external heat is supplied.

Ammonia is very soluble in water and much of the gas may be absorbed by spraying water on it. Leaking cylinders of ammonia may be handled much as those of chlorine except that if it is to be disposed of by absorption it should be absorbed in an acid solution, or even in plain water if sufficient quantity is available.

Nitrous Oxide Fumes

Under the heading of "nitrous oxide fumes" are commonly grouped three oxides of nitrogen usually found together: nitric oxide, NO; nitrogen dioxide, NO_2; and nitrogen tetroxide, N_2O_4. The mixture of gases is deep orange in color and extremely poisonous. These oxides are not shipped and sold as such but are formed by the action of nitric acid upon metals or organic material or by burning of nitrocellulose such as movie films, X-ray films, or other pyroxlin products such as brushing lacquers and many articles such as combs and other toilet articles. Extreme care should be used around such fumes as it is possible to inhale sufficient amounts to be fatal without a great deal of discomfort at the time of inhaling. Persons who are suspected of having inhaled the fumes should be kept quiet and taken immediately to a hospital in an ambulance and put to bed under a physician's care for 24 hours when they may be discharged if they develop no symptoms of poisoning.

Why Lumber Yard Fires Prove So Dangerous

Four million feet of cypress lumber as well as several sheds were destroyed in a lumber yard fire in Jacksonville, Fla. Every available piece of fire apparatus in the city answered the alarm. Damage was estimated at $200,000. The photograph shows the vast amount of flammable material that is stored in such yards, spread over a large area so that fire, when once started, usually has little difficulty in spreading.

Hydrogen Sulphide

Hydrogen Sulphide, H_2S, is a poisonous, colorless, inflammable gas heavier than air with the characteristic odor of rotten eggs.

It is usually made in plants where used although it is shipped in cylinders. Concentrations greater than 50 parts per million are dangerous for prolonged exposure. Leaking cylinders of the gas should be plugged and hauled to dump or the gas absorbed in an alkaline solution.

(*To be continued*)

Chrisman Heads New Mexico Firemen

At the recent convention of the New Mexico State Firemen's Association, Chief Rue Chrisman, of Roswell, was elected President. The other officers are J. B. Brown, Las Vegas, First Vice-President; Chief Ashley Pond, Santa Fe, Second Vice-President; Chief F. H. Beatty, Clayton, Third Vice-President; T. A. Rosenwald, Albuquerque, Secretary-Treasurer.

At the past convention there were representatives from 27 New Mexico departments, 3 Colorado departments and one Texas department.

The 1933 convention will be held at Las Cruces, June 5-7.

North Shore Fire Council Meets

James O'Connell, Chief Inspector of the Fire Prevention Bureau, New York Fire Department, was the speaker at the June meeting of the North Shore Fire Council held at Sea Cliff, N. Y. Previous to the meeting, the members were taken on a tour of inspection of the new central fire station which has just been opened. The station has three separate company rooms and a common auditorium on the second floor.

In his talk, Mr. O'Connell stated that the major portion of the Fire Chief's work should lie in the field of fire prevention. Each year New York City holds a fire essay contest for the school children and about 500,000 compositions are presented. These are read by the various school heads and about 8,000 of the better essays are forwarded to the Fire Department for further reading.

Following the meeting, the Sea Cliff Fire Department, of which Conrad Zipperian is Chief, served refreshments. It was the first large gathering held in the new station.

Corning Named Chief of Seattle

Following a Fire Department election, Mayor Dore, of Seattle, Wash., appointed Claude W. Corning as Chief of the Fire Department. The Mayor had announced that he would let the men of the Fire Department indicate their own choice for Chief and that he would name the one favored.

Chief Corning was appointed a fireman at the time that Seattle started the two-platoon system, April 2, 1913. He was promoted to Lieutenant on May 27, 1919 and on July 23, 1922, was advanced to Captain. On January 1, 1929 he was appointed Battalion Chief, and Chief of the Department on June 10, 1932.

He fills the vacancy caused by the resignation of Chief George M. Mantor.

Christy Resigns as Chief of Pueblo

Samuel P. Christy, Chief of the Fire Department of Pueblo, Col., for twenty-one years and a member of the department for twenty-seven years, tendered his resignation and made application for his pension. This action came as a complete surprise to the City Council. Chief Christy is sixty-four years old.

Lou Willis, Assistant Chief for the past ten years, has been named head of the department for a thirty-day period. However, belief is current that the appointment will hold until the civil service examinations are held in August.

Watertown, Mass., has awarded the Gamewell Company a contract to install a new central office signal system of the 3-fold pattern, manually operated. The cost will be $54,000. The town has just erected a new fireproof administration building in which is located the fire alarm system. It is set off entirely by itself.

Dependable Fire Hose!

ALONG the fire lines where protection of life and property depend upon the efficient functioning of your fire department—every man from Chief to Engineer realizes the importance of GOOD Fire Hose.

Buy GOOD Hose. Standardize on Paragon and other famous brands of Eureka.

Eureka Fire Hose Manufacturing Co.

50 Church St., New York City

. . . BRANCHES . . .

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EUREKA FIRE HOSE

Suburban and Forest Fire Service Ranger-Special Water Bag Hand Pump

FIRE fighting is a tough job calling for stamina.

Among other advantages the "RANGER-SPECIAL" Knapsack is light in weight and gives "CUSHION COMFORT" which means conservation of energy and a better job done.

Can be carried on Fire truck filled. Shoots powerful 60-foot stream.

FENWICK-REDDAWAY MFG. CO.

NEWARK, N. J.

The Lower Cost of a Barton Fire Pump Results Solely From a More Simple Design and Advanced Engineering—Not from Any Cheapening Whatsoever. No Fire Pump Offered Today is Finer Built Than the Barton . . . .

Without the slightest sacrifice of quality or performance, a Barton Centrifuga! Fire Pump will save you hundreds of dollars in first cost. No special fire truck is required. Any standard commercial chassis can be used, and without costly changes, special transmission, etc. As shown above, the Barton Pump mounts on the front, and is driven by the truck motor in a simple, positive manner. Both the U-34 (300-gallon) and U-45 (500-gallon) Pumps have passed the Underwriters' 12-hour Tests. Both will pump clean or dirty water from city mains or at suction. They are automatically primed. 1932—the year of strict economy—demands the use of Barton Fire Pumps. Consult your apparatus dealer, or write us for Bulletin 60. AMERICAN STEAM PUMP COMPANY, Battle Creek, Michigan.

BARTON FIRE PUMPS

DAY'S *metal* HOSE BRIDGES

Protect Hose—Keep Traffic Moving

Here's a necessity in every department. Made for one, two or three lines of hose. Tested to stand 15 ton load, light enough to handle easily. They will not slide on road. Sold in pairs that nest on apparatus. They save costly hose, create good will by keeping traffic moving and last a lifetime. Write for prices, now.

GUS L. DAY MENDHAM, N. J.

COMFORT AND SECURITY WITH THE

CAIRNS

LATEST LOW HEAD CUSHION LINED

HELMET

COMFORTABLE AS YOUR OLD FELT HAT: WON'T SHAKE OFF

Never go to a fire without the protection of a good helmet. It may save your life.

Send for your copy of Catalog No. 227, showing this latest improvement.

CAIRNS & BROTHER

72 GRAND STREET Established 1836 NEW YORK

The FINEST LARGE NOZZLES *and* DECK GUNS are "Made by MORSE"

Practically every well known Fire Boat in service in this country today is equipped with MORSE "Invincible" Nozzles, many pieces of fire apparatus are also equipped with these exceptionally fine nozzles. They are the result of nearly a hundred years of experience in producing nozzles that are a lot better than the general run of fire nozzles.

ANDREW J. MORSE & SON, INC.

221 High Street BOSTON, MASS.

JOHN H. CLAY, INC.

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Established 1864

DOOR SPRINGS

Complete Automatic Spring Outfits for Doors Opening In and Out. Used throughout the world. Once on the doors your door opening troubles cease. They last a lifetime. Send for Bulletins.

Quick Acting Reliable

Anderson-Hale Improved

FIRE STATION DOOR OPENERS

Over 1,300 sets of Anderson-Hale Fire Station Door Openers are in successful use. They provide simple, durable, quick-acting doors that open inward. No obstruction to sidewalk. Attractive in appearance, cannot sag, closes tight, excludes cold, gives clear opening. Opens from driver's seat or from floor. Many repeat orders from users.

Write for complete information.

The Anderson Coupling & Fire Supply Co.

Mfrs. Motor Fire Equipment and Fire Supplies

Kansas City, Kansas

TRIPLE COMBINATION 3 TONE FEDERAL WHISTLE

A low pressure triple combination air whistle that will operate off of any existing fire alarm system. It has no equal for tone volume. No moving parts—nothing to get out of order. Guaranteed for 10,000 hours of continuous blowing. Get complete details and attractive price by writing for Bulletin 38.

FEDERAL ELECTRIC COMPANY

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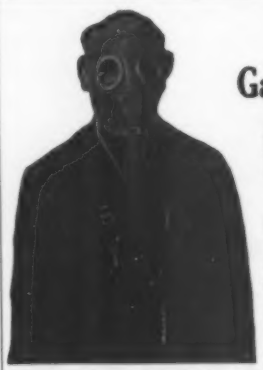

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Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

Over 5,000 Victor Gas Masks in Service

Full Line Fire Dept. Supplies and Equipment

New 43 Edition Catalog on Request

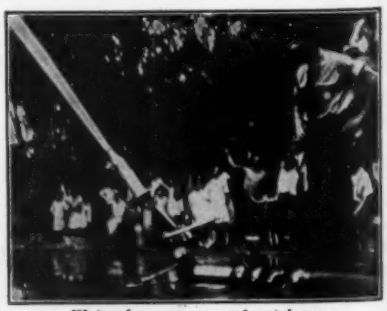
The Woodhouse Mfg. Co., Inc.

156 Chambers St., New York

D. A. Woodhouse, Pres. and Gen. Mgr. George J. Kuss, Vice-Pres. and Treas.

THE NEW EASTMAN DELUGE GUN

is a portable turret pipe that can be used on the ground or mounted on the apparatus. This photo shows our three-way gun used on the ground, connected to two lines of hose. This gun may be furnished with either two-way, three-way or four-way Siamese, as desired.



Write for new general catalogue

SAMUEL EASTMAN COMPANY

Concord, N. H., U. S. A.

FIRE DEPARTMENT ACTIVITIES

Fairview, Pa., decided not to build a fire house this year.

An aerial ladder truck has been delivered to Galion, Ohio.

Salem, Va., now has apparatus for answering county calls.

Fall River, Mass., is considering the purchase of a ladder truck.

Iowa City, Ia., is awaiting the delivery of Seagrave apparatus.

A 700-gallon Mack pumper has been delivered to San Mateo, Cal.

Austin, Tex., has invited bids for the construction of a fire station to cost $12,000.

San Antonio, Tex., has awarded a contract for the construction of a fire station.

Helmetta, N. J., has received a 500-gallon pumper equipped with a 150-gallon booster tank.

Portsmouth, Ohio, has opened bids for the purchase of a quadruple unit and a triple unit.

Volunteer firemen of Hayward, Cal., have requested the Council to purchase a resuscitator.

Essex Fells, N. J., voted to purchase a 1,000-gallon pumper to be delivered before the close of the summer season.

Brookhaven, N. Y., voted to purchase fire apparatus to cost $6,000. The fire district will float a bond issue.

An aerial fire patrol for the county has been recommended by the Alameda County (Calif.) Association of Firemen.

West Liberty, Ia., has purchased a 500-gallon pumper for $5,500. It replaces an old unit that was purchased in 1920.

Lewiston, Me., has selected Reuben E. Estes as Chief. He has been a member of the department for twenty-one years.

Roosevelt, N. Y., has purchased a Pirsch pumper and a hose wagon. The latter piece will be delivered some time in August.

Sixty Iowa towns have banished the sales of fireworks. This action is largely the result of the $1,000,000 fire at Spencer last year.

South Fallsburg, N. Y., has contracted for two Sanford pumpers—a 500-gallon and a 600-gallon size. Delivery is expected about August 1.

Henry Lanouette, Chief of the Fire Department at Lake Linden, Mich., died at his home. He is survived by his widow and two daughters.

City Council of Reading, Pa., has been requested by Ladder Co. 1 to purchase a new 85-foot aerial ladder as the one now in service is considered unsafe.

Richard F. Gardner, formerly Chief of Huntington, Ind., died in the county hospital at the age of seventy, following a serious illness. He had served as Chief for twelve years.

Chief Mark Ryan, of Redwood City, Cal., has just been chosen as Fire Department head for the eighteenth term. He joined the department in 1914 and was named Chief in 1915.

Funds for Fire Department work are being raised in Palmyra, N. J. A house-to-house canvass is being made and those who contribute are given membership in the department.

The annual convention of the Tennessee Firemen's Association will be held in Knoxville, October 6-8. Chief C. M. Johnson has been appointed to make the necessary program arrangements.

San Diego, Cal., City Council reappointed Chief Louis Almgren as head of the Fire Department. The City Manager paid high tribute to the ability and efficiency of the veteran Chief.

Chief P. J. Hurley of Holyoke, Mass., who has been confined to a hospital for some time, was able to leave for home on June 30. He is a past-president of the New England Association of Fire Chiefs.

William Charter, Former Chief of Nyack, N. Y., and an organizer of the Nyack Fire Patrol, died at his home at the age of fifty-eight. He is survived by his widow, a son, two daughters, and two brothers.

Firemen of Milwaukee, Wis., voluntarily agreed to a ten per cent cut in pay. The Mayor is opposed to pay cuts for city workers but indications are that the firemen will be able to slice their own salaries.

A fire prevention school is to be held at West Virginia University, July 25-28. A full day will be devoted to fire-fighting equipment demonstrations. The school is in charge of Lewis V. Carpenter of the University.

A. C. Buck, a former Chief of Urbana, Ohio, died in a Columbus hospital at the age of seventy-five. He was a member of the Fire Department for twenty-two years and resigned in 1907, after sering as Chief for four years.

Plans are being made for the second annual firemen's short course which will be held in Billings, Mont., August 22-24. Last year the school was held at Bozeman and about 150 men took the course. Chief W. O. Matthews of Bozeman is Chairman of the School Committee.

When the Council of Chetek, Wis., refused to confirm the election of a Fire Chief, the volunteer firemen resigned. The Council, it is claimed, refused to allow the full charge for services in fighting a warehouse fire. The Council has issued a call for new volunteer firemen.

At the annual convention of the Southern New York Volunteer Firemen's Association held at Roosevelt, L. I., Henry Holder of Stapleton, S. I., was chosen President; Bernard J. Loonan, Freeport, First Vice-President; Eugene Osborne, Amityville, Second Vice-President and Philip Peters, Elmhurst, Treasurer.

Chiefs and Assistant Chiefs of Maine held a meeting in Portland, Me., to confer with C. F. Klinefelter, Special Agent of the Federal Board for Vocational Education, on a study that was conducted in sixteen cities at the request of the I. A. F. C. The story covers the scope of the fireman's job together with the training needs and the type of educational material which will be of value in improving firemen on the job.

Asst. Chief S. H. Dodd, Los Angeles, Retires

Sam H. Dodd, Assistant Chief, Los Angeles Fire Department, retired from the service on July 1. He underwent a major operation in January, and as a result could not do full justice to the tasks in his charge.

He is internationally known as a Fire Department educator because of his position as head of the Los Angeles Fire College. Asst. Chief Dodd is fifty-three years old and has been a member of the department twenty-nine years.

He is succeeded by Captain Gowell.

Northwest Arkansas Firemen Convene

Chief Freeman Newman of Berryville, Ark., was elected President of the Northwest Arkansas Firemen's Association at their convention held in Berryville, June 21-22.

During the afternoon of the first day there was a barbecue and in the evening, the Berryville Fire Department gave an exhibition drill. Firemen were guests at a local theatre.

The following morning there was an exhibition of the motion picture, "The Salvage Man." Assistant Chief John Dixon, Jr., of Fort Smith, led a round table discussion. Lawrence Evans, Assistant Drillmaster, Tulsa, lectured on the subject of ladders and knots and gave demonstrations. The care and operation of motors and pumps were explained by A. B. Busby, Engineer, American-LaFrance Fire Engine Company.

George D. Suter, Engineer, Arkansas Fire Prevention Bureau, spoke on "Fire Streams and Fire Department Hydraulics." There was a demonstration of streams, ladders and pumps. The convention closed with a dance.

Other officers elected are Howard Edwards, Rogers, Vice-President, and F. M. Brock, Bentonville, re-elected Secretary-Treasurer. The convention next year will be held in Fayetteville at a date to be decided later.

POSITIONS WANTED

These advertisements are inserted without charge as a service offered by FIRE ENGINEERING to everyone in the fire field. Use it.

Position Wanted

Former Battalion Chief and Drill Master recently connected with large Metropolitan city Fire Department desires position of some kind. Has over 10 years service and has seen actual service in over 8,000 fires. 30 years of age. War Veteran. References sent on request. Will go any place. Address: Box 650, c/o FIRE ENGINEERING, 24 W. 40th St., New York.
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Apparatus Driver

Desires position driving apparatus. Experienced with America-LaFrance and Seagrave machines. Best of references can be furnished. Address: Box 655, c/o FIRE ENGINEERING, 24 W. 40th St., New York.
7-8

Driver

Experienced. For the past five years connected with fire department driving and Ahrens-Fox machine. Willing to take position in any location. Best of references available. Address: Box 645 c/o FIRE ENGINEERING, 24 W. 40th St., New York.

Fire Chief

Have several years experience, am capable of handling medium size department, 38 years of age, married. Have held highest office in State Associations. Prefer place somewhere in South. Can furnish A1 references. Address: Box 660, c/o FIRE ENGINEERING, 24 W. 40th St., New York.
7-8

PROPOSED IMPROVEMENTS

Lakeside Park, Cal. — The City Council was requested to purchase some light fire fighting equipment, according to reports.

Waterloo, Ia.—Fire Chief Ray Tiller recommended in his annual report that two additional fire stations be established.

New Orleans, La.—City considering purchase of flood light wagon for fire fighting to cost about $14,000, according to reports.

Tyler, Minn.—Village council voted in favor of purchasing fire truck. H. F. Ries, Village Recorder.

Wheeling, W. Va.—Council interested in purchases of new fire truck for Shadyside section, according to reports.

Yakima, Wash.—Reports state ordinance being prepared by V. Nicholson, City Attorney for a $40,000 bond issue to provide funds for installation of a fire alarm system. W. W. Stratton, Mayor.

Wanted
Fire Hose Salesmen

To sell CRACKERJACK Hose in New York and New Jersey. Good proposition. Address reply in writing, giving qualifications, etc., to The American Rubber Mfg. Co., P. O. Box 996, Plainfield, N. J.
7

CONVENTION DATES

July 9-10—NORTHERN CALIFORNIA FIRE CHIEFS' ASSOCIATION. Quarterly Convention, Scotia, Cal. Secretary, Chief Clemo, Palo Alto, Cal.

July 11-14—MICHIGAN STATE FIREMEN'S ASSOCIATION. 58th Annual Convention, Monroe, Mich. Secretary, H. L. Williams, Ludington, Mich.

July 12-13—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. 27th Annual Convention, Sumter, S. C. Secretary, R. S. Hood, Sumter.

July 16—NEW JERSEY AND NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. 19th Annual Convention, Fort Lee, N. J.

July 19-22—DOMINION ASSOCIATION OF FIRE CHIEFS. 24th Annual Convention, Canadian National Hotel Nova Scotian, Halifax, Nova Scotia. Exhibits, same place. Secretary, Chief James Armstrong, Kingston, Ont. Chairman of Exhibits, Chief W. S. Vaughan, St. John, N. B.

July 23-27—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 10th Annual Convention. San Diego, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Ave., San Diego.

July 25-28—WEST VIRGINIA STATE FIRE CHIEFS' ASSOCIATION. 1st Annual Convention, Morgantown, W. Va. Secretary, Chief C. J. Powell, Romney, W. Va.

July 27-28—CENTRAL NEW YORK FIREMEN'S ASSOCIATION. 39th Annual Convention, Watkins Glen, N. Y. Secretary, Thomas J. Murray, Cortland, N. Y.

Aug.—VERMONT STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention (exact date to be decided later), Bennington, Vt. Secretary-Treasurer, Chief Alfred H. Koltonski, Rutland, Vt.

Aug. 1-4—COLORADO STATE FIREMEN'S ASSOCIATION. 16th Annual Convention, Fire College and Tournament, Sterling, Col. (Postponed from former date, at Teluride, Col.) Secretary, Clinton Turnbull, 303 Jacobson Bldg., Denver, Col.

Aug. 1-4—NORTH CAROLINA STATE FIREMEN'S ASSOCIATION. Annual Convention, Hamlet, N. C. Secretary, John L. Miller, Concord, N. C.

Aug. 2-4—INDIANA FIREMEN'S ASSOCIATION. 16th Annual Convention, Columbus, Ind. Secretary, Clem Smith, Post Office Box 520, Terre Haute, Ind.

Aug. 8-9—MISSOURI ASSOCIATION OF FIRE FIGHTERS. 8th Annual Convention, St. Louis, Mo. Secretary-Treasurer, M. J. Mulvoy, 3500 So. Grand Boulevard, St. Louis, Mo.

Aug. 8-11—TEXAS FIREMEN'S TRAINING SCHOOL. 3rd Annual School, Texas A. & M. College, College Station, Tex. Director, Prof. H. R. Brayton, Dept. of Chemistry and Chemical Engineering, College.

Aug. 9-11—WISCONSIN PAID FIREMEN'S ASSOCIATION. 25th Annual Convention, Janesville, Wis. Secretary-Treasurer, Asst. Chief William H. Schultz, Sheboygan, Wis.

Aug. 9-12—VIRGINIA STATE FIREMEN'S ASSOCIATION. 46th Annual Convention, and Tournament, Alexandra, Va. Annual Convention, State Fire Chiefs' Association. Secretary, O. W. Dabney, Staunton, Va.

Aug. 9-12—CUMBERLAND VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 32nd Annual Convention, Alexandria, Va. Secretary, C. L. Jacobs, Waynesboro, Pa.

Aug. 19-20—CONNECTICUT STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Broad Street School Auditorium, Pawcatuck, Conn. Secretary, D. W. Harford, 10 Chestnut Street, So. Norwalk, Conn.

Aug. 19-21—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. 60th Annual Convention, Lake Placid, N. Y. Secretary, Fred A. Davis, Fort Edward, N. Y.

Aug. 22-25—MONTANA STATE FIREMEN'S ASSOCIATION. 41st Annual Convention and 2nd Firemen's Short Course, Billings, Mont. Secretary-Treasurer, D. E. Moser, Billings, Mont.

Aug. 25-27—WASHINGTON STATE FIREMEN'S ASSOCIATION. 10th Annual Convention and Fire College, Yakima, Wash. Secretary, H. S. Jenkins, Fire Department, Bellingham, Wash.

Sept.—ARKANSAS STATE FIREMEN'S ASSOCIATION. 11th Annual Convention and Fire College, El Dorado, Ark. Secretary-Treasurer, H. D. Compton, Little Rock, Ark.

Sept. 6-8—KENTUCKY FIREMEN'S ASSOCIATION. 13th Annual Convention, Corbin, Ky. Secretary, Capt. S. G. Render, 940 Starks Bldg., Louisville, Ky.

Sept. 6-8—MARYLAND SHORT COURSE FOR FIREMEN. 3rd Annual Course, Engineering College, University of Maryland, College Park, Md. Address, Dean A. N. Johnson, College of Engineering, at the Univers.ty.

Sept. 6-8—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 53rd Annual Convention, Springfield, Mass. Secretary, Daniel J. Looney, 448 Old South Bldg., Boston, Mass.

Sept. 8-10—LOUISIANA STATE FIREMEN'S ASSOCIATION. 27th Annual Convention, Lafayette, La. Secretary, Chief A. J. Bethancourt, Houma, La.

Sept. 13-15—ILLINOIS FIREMEN'S ASSOCIATION. 45th Annual Convention, Orlando Hotel, Decatur, Ill. Secretary, Asst. Chief Roy W. Alsip, Fire Department, Champaign, Ill.

Sept. 14-15—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. 4th Annual Convention, Appleton, Wis. Secretary, Chief Arthur J. Rahn, Two Rivers, Wis.

Sept. 16-17—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 55th Annual Convention, Atlantic City, N. J. Secretary, William Exall, 602 Chamber of Commerce Bldg., Newark, N. J.

Sept. 19-23—OHIO FIRE SCHOOL. 3d Annual Fire School, Ohio State University, Columbus. Director, Harvey Walker, Dept. of Political Science, State University.

Sept. 21-22—NEW CASTLE COUNTY FIREMEN'S ASSOCIATION, Annual Convention, Wilmington, Del.

Sept. 21-23—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. 12th Annual Convention, Wilmington, Del. Secretary, Sam H. Carson, Dover, Del.

Oct. 4-6—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. 53rd Annual Convention, Lancaster, Pa. Secretary, Charles E. Clark, Wayne, Pa.

Oct. 6-8—TENNESSEE FIREMEN'S ASSOCIATION. 2nd Annual Convention, Knoxville, Tenn. Secretary-Treasurer, Joe J. Martin, Fire Department, Nashville, Tenn.

Oct. 18-19—RAILWAY FIRE PROTECTION ASSOCIATION. 19th Annual Convention, Cleveland, Ohio. Secretary-Treasurer, R. R. Hackett, 601 Baltimore & Ohio Bldg., Baltimore, Md.

Oct. 18-20—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 50th Annual Convention, Falls City, Neb. Secretary-Treasurer, Fred. W. Muller, Norfolk, Neb.

Oct. 18-21—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 60th Annual Convention, San Diego, Cal. Convention Headquarters, U. S. Grant Hotel; Meeting and Exhibits, San Diego Municipal Pier. Secretary-Treasurer, Ex-Chief James J. Mulcahey, 16 Franklin Avenue, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief, W. S. Minter, Long Beach, Cal.

Oct. 18-21—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention during Convention of International Association of Fire Chiefs, San Diego, Cal. (Exact date not set.) Secretary-Treasurer, Chief Ray Tiller, Waterloo, Ia.

Oct. 10-13—SOUTHWESTERN ASSOCIATION OF FIRE CHIEFS. 5th Annual Convention, to be held at Houston, Tex. Secretary-Treasurer, J. F. Taplin, Blackwell, Okla.

May, 1933—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 4th Annual Convention, Easton, Md. (Exact date to be decided later.) Secretary, A. C. Bailey, Laurel, Del.

Department and Other Reports Received

Melbourne, Australia—Report of the Metropolitan Fire Brigades Board, Melbourne, Australia, illustrated.

Shanghai, China—Report of the Fire Brigade, Shanghai, China; illustrated, nineteen pages and cover.

New Jersey State Firemen's Association—Report of the fifty-fourth annual convention of the New Jersey State Firemen's Association held in Atlantic City, N. J., September 18-19; 129 pages and cover.

Wilmington, Del.—Annual report of the Superintendent of Public Safety, Wilmington, Del., containing the report of Chief William J. Lutz; illustrated, ninety-three pages and cover.

Central Western Ohio Firemen's Association—Proceedings of the first annual convention of the Central Western Ohio Firemen's Association held in West Milton, Ohio, June 24; illustrated, sixty-six pages and cover.

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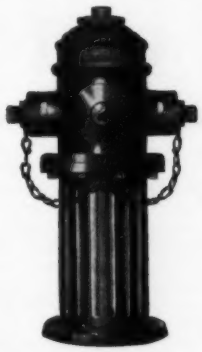

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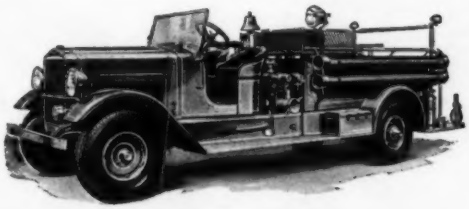

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FALSE ALARMS

UNDUE RISK

He was just one of the many who delight to loaf about the waterfront. However, his intelligence was much below the average. He was quite thrilled when he saw a fireboat christened and the scene remained fixed in his memory.

He was, therefore, horrified when a woman for whom he did repair jobs, asked him to tell the minister to call and arrange for the christening of her baby.

He asked with wonder, "Do you mean to say you are going to let somebody hit that little thing over the head with a bottle."

"Don't get discouraged, Jake. It was almost three weeks that I was with the Young America Company before I got my chance to crash a big window."

UNFAIR DEAL

One of the boys drove up to the fire station with a car that was the latest model, many, many years ago. His friends in the station rushed out to see the odd contraption.

"How much did you pay for that car, George?" he was asked.

"I didn't pay anything for it," answered George gruffly. "It was a present to me."

"George, you've been robbed."

About the only thing that can lay down on the job and get results is a hen.

TIME FOR ACTION

The young bride had not become accustomed to the arduous duties that her position involved. And as for a scientific instrument as a clinical thermometer—that was simply too complicated for words.

Hubby took sick, as some men will. She called the doctor. In order that the medical man might know what to take with him, he asked over the phone:

"Have you taken his temperature?"

"Yes, doctor, I have. It reads 138."

"Madam," replied the physician sternly, "there is little I can do. What you should do is call the Fire Department."

The center of population is usually at an intersection where the cop sarcastically asks you if you know how to drive a car.

FOLLOWING THROUGH

He had been summoned to court for failing to give approaching fire apparatus the right of way. The motorist had a large number of local friends at hand in court to testify for him. Every one was anxious to say some good word and to argue for leniency. All this was trying to the judge's nerves. He said:

"The next person who interrupts the proceedings will be sent home."

"Hooray," shouted the motorist.

Depression version: Four out of five had it.

NOT HIS OWN

Pay day was but a few days away, and as such grand events did not occur very frequently, the men were just about financially broke.

"Suppose you should find five dollars in your pocket," remarked one to another as he was polishing the engine.

"I'd think I had somebody else's pants on."

Ad in newspaper: "Wanted—Stenographer for heating contractor's office." So it's come to that.

—Drawing by "Art" Estey

Although Firemen Decided Not to Work at This Fire, the Varied Breeds of Dogs in the Neighborhood Had an Excellent Time

There are trucks and trucks. What distinguished this particular vehicle from the others on the highway was that it was loaded with Roman candles, skyrockets, devil chasers, pinwheels and other material for a whining, zooming, crashing pyrotechnic display. While such cargoes are not looked upon with much relish, there is no regulation to bar them from the roads. In this affair, which took place in New Jersey, the driver noticed flames coming up from beneath the cab of his truck, and knowing the nature of the shipment, he deserted the truck and dashed to the nearest 'phone. When the volunteer firemen arrived, there was little they could do as they could not get near enough to the fire. But the nondescript variety of dogs in the district had a memorable time. They went yelping about and added to the general disturbance. Most of the dogs had a good time, but not all—when the fire was over two pups were found dead on the road.

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7 Alarm Systems, Industrial
8 Alarm Systems, Municipal Telegraphic
9 Alarms, Thermostatic
10 Asbestos Clothing
11 Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars
14 Battery Zincs for Fire Alarm Batteries
15 Bells, Fire Alarm, Municipal
16 Body Equipments
17 Boxes, Gongs, Reels, Registers, Fire Alarm
18 Brakes, Air
19 Brake Linings
20 Brooms, Fire
21 Building Materials, Fire Retardant
22 Caps, Firemen's
23 Chains, Non-Skid Fire Apparatus
24 Chassis for Fire Apparatus
25 Chemical Engines and Tanks
26 Chimney Fire Fuses & Compounds
27 City Service Trucks
28 Coats & Suits, Firemen's Quick Hitch
29 Combination Chemical and Hose Cars
30 Cutting & Welding Equipment, Blow Torch
31 Cutting & Welding Equipment, Electric
32 Deluge Sets
33 Door Openers, Fire Station, Automatic
34 Extinguishers, Calcium Chloride
35 Extinguishers, Carbon Dioxide
36 Extinguishers, Soda-Acid
37 Extinguishers, Carbon Tetrachloride
38 Extinguishers, Foam
39 Extinguishers, Powder
40 Fire Boat Nozzle Equipment
41 Fire Department Supplies, General
42 Fire Exit Devices, Door Opening
43 Fire Alarm Posts
44 Fire Escapes, Portable
45 Fire Escapes, Rigid
46 First Aid Equipment
47 Flare Lights
48 Flashlights, Hand
49 Flood Lighting Equipment
50 Foam Generating Apparatus
51 Foam Liquid for Extinguishers
52 Gas Masks and Respirators
53 Gas & Smoke Helmets
54 Gas & Smoke Generators
55 Goggles, Firemen's
56 Helmets, Metal, etc.
57 Hose Bridges
58 Hose Carts, Reels & Racks
59 Hose Clamps
60 Hose, Fire
61 Hose, Chemical
62 Hose Holders
63 Hose Jackets
64 Hose Standardization Tools
65 Hydrant Draining Pumps
66 Hydrants, Fire
67 Jacks for Fire Trucks
68 Jacks, Shoring & Prying
69 Ladders, Fire
70 Lightning Arresters
71 Motorcycles, Fire Dept. Equipped
72 Nets, Life
73 Nozzles, Pipes and Miscellaneous Brass Goods
74 Packings, Pumps
75 Pads, Pole Hole
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78 Pumping Cars, Standard
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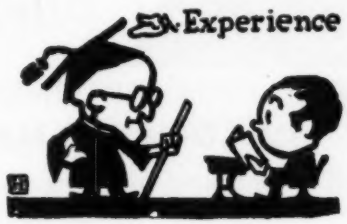
80 Pumps, Fire Apparatus
81 Pumps, Fire Service, Stationary
82 Pumps, Portable for Fire Protection
83 Record Books, Fire
84 Relief Valves
85 Reviving Apparatus, Oxygen
86 Rubber Clothing
87 Salvage Covers
88 Searchlights
89 Shingles, Fire Retardant
90 Shirts, Firemen's Special
91 Sirens, Apparatus & Chiefs' Cars
92 Sliding Poles
93 Soda & Acid Chemicals
94 Spark Plugs, Fire Apparatus and Motorcycles
95 Squad and other Auxiliary Cars
96 Sprinkler Head Shut-Offs
97 Sprinkler Supervisory Service
98 Sprinkler Systems, Automatic, Foam
99 Sprinkler Systems, Automatic, Water
100 Steam Fire Engines
101 Syphons, Water
102 Tarpaulins & Fire Blankets
103 Tetrachloride Chemicals
104 Thawing Equipment, Hydrant
105 Tires, Fire Apparatus, Pneumatic, Solid, Cushion and Non-Skid
106 Tractors
107 Traffic Clearing Systems
108 Triple Combination Pumping Cars
109 Uniforms
110 Water Towers
111 Wheels, Cushion
112 Whistles, Fire Alarm, Compressed Air
113 Whistles, Fire Alarm, Steam
114 Whistles, Fire Apparatus
115 Wrecking Trucks



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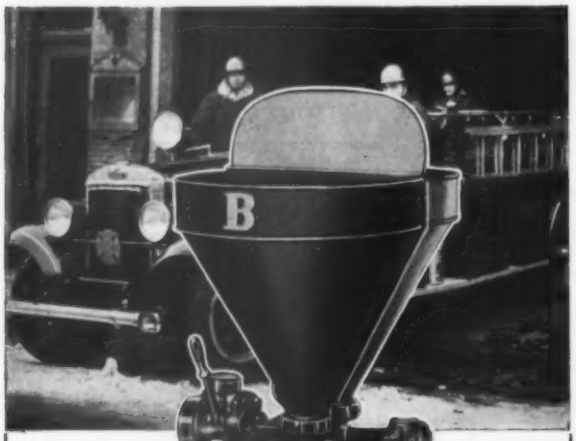

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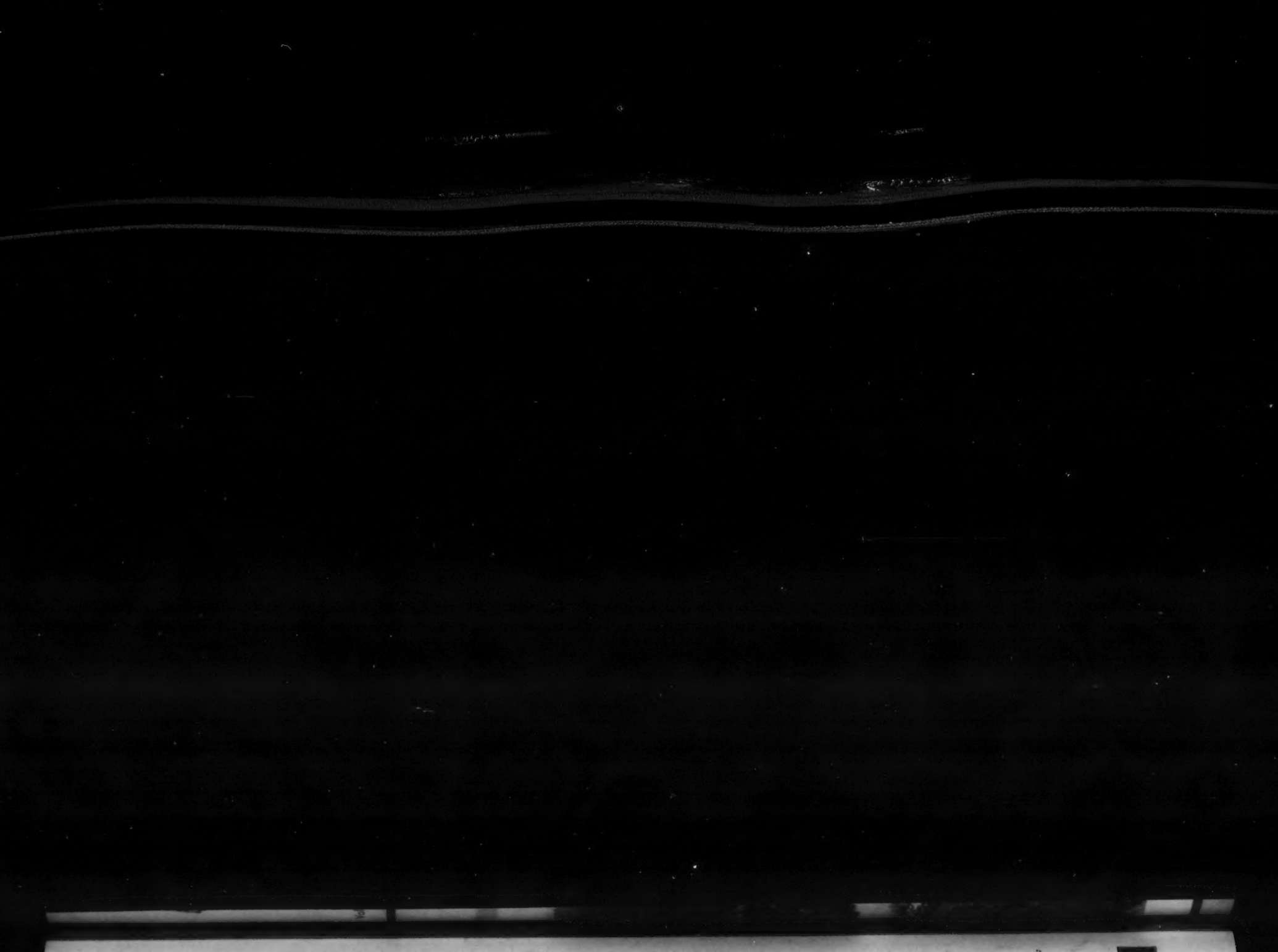
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